SAFETY DATA SHEET
According to EC No 1907/2006 as amended as at the date of this SDS

ShellSol D40

Version	Revision Date:	SDS Number:	Date of last issue: 17.03.2023
1.4	23.11.2023	800001005776	Print Date 30.11.2023

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

1.1 Product identifier

Trade name	:	ShellSol D40
Product code	:	Q3362
Registration number EU	:	01-2119463258-33-0000
Synonyms	:	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
EC-No.	:	919-857-5

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

Use of the Substance/Mixture	:	Industrial Solvent. Please refer to section 16 and/or the annexes for the registered uses under REACH.
Uses advised against	:	This product must not be used in applications other than the above without first seeking the advice of the supplier.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier	:	**Shell Chemicals Europe B.V.** PO Box 2334 3000 CH Rotterdam Netherlands
Telephone	:	+31 (0)10 441 5137 / +31 (0)10 441 5191
Telefax	:	+31 (0)20 716 8316/ +31 (0)20 713 9230
Contact for Safety Data Sheet	:	sccmsds@shell.com

1.4 Emergency telephone number

+44 (0) 1235 239 670 (This telephone number is available 24 hours per day, 7 days per week)
Poison Center Information: +358 9 471 977 (24h)

1.5 Other information

KT code	:	246 Production of other chemical products
TOL code	:	48 Solvents
Other information	:	SHELLSOL is a trademark owned by Shell Trademark Management B.V. and Shell Brands Inc. and used by affiliates of Shell plc.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 3	H226: Flammable liquid and vapour.
Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.
Specific target organ toxicity - single exposure, Category 3, Narcotic effects	H336: May cause drowsiness or dizziness.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements :

PHYSICAL HAZARDS:
H226 Flammable liquid and vapour.
HEALTH HAZARDS:
H304 May be fatal if swallowed and enters airways.
H336 May cause drowsiness or dizziness.
ENVIRONMENTAL HAZARDS:
Not classified as environmental hazard according to CLP criteria.

Supplemental Hazard Statements : EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements :

Prevention:

P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331 Do NOT induce vomiting.

Storage:

No precautionary phrases.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB.

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

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

May form flammable/explosive vapour-air mixture.
This material is a static accumulator.
Even with proper grounding and bonding, this material can still accumulate an electrostatic charge.
If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur.

SECTION 3: Composition/information on ingredients

3.1 Substances

Components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Not Assigned 919-857-5	<= 100

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Not expected to be a health hazard when used under normal conditions.

Protection of first-aiders : When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.

If inhaled : Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

In case of skin contact	:	Remove contaminated clothing. Immediately flush skin with large amounts of water for at least 15 minutes, and follow by washing with soap and water if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.
In case of eye contact	:	Flush eye with copious quantities of water. Remove contact lenses, if present and easy to do. Continue rinsing. If persistent irritation occurs, obtain medical attention.
If swallowed	:	Call emergency number for your location / facility. If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	:	Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, lightheadedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death. Skin irritation signs and symptoms may include a burning sensation, redness, or swelling. No specific hazards under normal use conditions. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	Call a doctor or poison control center for guidance. Potential for chemical pneumonitis. Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Clear fire area of all non-emergency personnel. Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds. Flammable vapours may be present even at temperatures below the flash point. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Will float and can be reignited on surface water.

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).
Specific extinguishing methods	:	Standard procedure for chemical fires.
Further information	:	Keep adjacent containers cool by spraying with water.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Observe all relevant local and international regulations. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained. 6.1.1 For non emergency personnel: Avoid contact with skin, eyes and clothing. Isolate hazard area and deny entry to unnecessary or unprotected personnel. Do not breathe fumes, vapour.

Do not operate electrical equipment.
6.1.2 For emergency responders:
Avoid contact with skin, eyes and clothing.
Isolate hazard area and deny entry to unnecessary or unprotected personnel.
Do not breathe fumes, vapour.
Do not operate electrical equipment.

6.2 Environmental precautions

Environmental precautions : Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment.
Monitor area with combustible gas indicator.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : For small liquid spills (< 1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.
For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely

Ventilate contaminated area thoroughly.
If contamination of site occurs remediation may require specialist advice.

6.4 Reference to other sections

For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet., For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures : Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet.
Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropri-

ate controls for safe handling, storage and disposal of this material.
Ensure that all local regulations regarding handling and storage facilities are followed.

Advice on safe handling : Avoid inhaling vapour and/or mists.
Avoid contact with skin, eyes and clothing.
Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks.
Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols.
Bulk storage tanks should be diked (bunded).
When using do not eat or drink.

The vapour is heavier than air, spreads along the ground and distant ignition is possible.

Product Transfer : Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur. Be aware of handling operations that may give rise to additional hazards that result from the accumulation of static charges. These include but are not limited to pumping (especially turbulent flow), mixing, filtering, splash filling, cleaning and filling of tanks and containers, sampling, switch loading, gauging, vacuum truck operations, and mechanical movements. These activities may lead to static discharge e.g. spark formation. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/s until fill pipe submerged to twice its diameter, then ≤ 7 m/s). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations.

Refer to guidance under Handling section.

Hygiene measures : Wash hands before eating, drinking, smoking and using the toilet. Launder contaminated clothing before re-use. Do not ingest. If swallowed, then seek immediate medical assistance.

Read in conjunction with the Exposure Scenario for your specific use contained in the Annex.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

Further information on storage stability : Storage Temperature:
Ambient.

Bulk storage tanks should be diked (bunded).
Locate tanks away from heat and other sources of ignition.
Cleaning, inspection and maintenance of storage tanks is a

specialist operation, which requires the implementation of strict procedures and precautions.
Must be stored in a diked (bunded) well- ventilated area, away from sunlight, ignition sources and other sources of heat.
Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products which are not harmful or toxic to man or to the environment.
Electrostatic charges will be generated during pumping.
Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment to reduce the risk.
The vapours in the head space of the storage vessel may lie in the flammable/explosive range and hence may be flammable.

Packaging material : Suitable material: For containers, or container linings use mild steel, stainless steel., For container paints, use epoxy paint, zinc silicate paint.
Unsuitable material: Avoid prolonged contact with natural, butyl or nitrile rubbers.

Container Advice : Do not cut, drill, grind, weld or perform similar operations on or near containers.

7.3 Specific end use(s)

Specific use(s) : Please refer to section 16 and/or the annexes for the registered uses under REACH.

See additional references that provide safe handling practices for liquids that are determined to be static accumulators: American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practices on Static Electricity).
IEC/TS 60079-32-1: Electrostatic hazards, guidance

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Dearom. Mineral spirits 150 - 200	Not Assigned	TWA	1.200 mg/m3	EU HSPA

Biological occupational exposure limits

No biological limit allocated.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
ShellSol D40	Workers	Dermal	Long-term systemic effects	208 mg/kg bw/day
ShellSol D40	Workers	Inhalation	Long-term systemic effects	871 mg/m3
ShellSol D40	Consumers	Dermal	Long-term systemic effects	125 mg/kg bw/day
ShellSol D40	Consumers	Inhalation	Long-term systemic effects	185 mg/m3
ShellSol D40	Consumers	Oral	Long-term systemic effects	125 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Remarks:	Substance is a hydrocarbon with a complex, unknown or variable composition. Conventional methods of deriving PNECs are not appropriate and it is not possible to identify a single representative PNEC for such substances.	

8.2 Exposure controls

Engineering measures

Read in conjunction with the Exposure Scenario for your specific use contained in the Annex.
Use sealed systems as far as possible.
Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits.
Local exhaust ventilation is recommended.
Firewater monitors and deluge systems are recommended.
Eye washes and showers for emergency use.
Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include:

General Information:
Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.
Define procedures for safe handling and maintenance of controls.
Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.
Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.
Drain down system prior to equipment break-in or maintenance.
Retain drain downs in sealed storage pending disposal or subsequent recycle.

Personal protective equipment

Read in conjunction with the Exposure Scenario for your specific use contained in the Annex.
The provided information is made in consideration of the PPE directive (Council Directive 89/686/EEC) and the CEN European Committee for Standardisation (CEN) standards.

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Eye protection : If material is handled such that it could be splashed into eyes, protective eyewear is recommended.
Approved to EU Standard EN166.

Hand protection

Remarks : Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. Longer term protection: Nitrile rubber gloves. Incidental contact/Splash protection: PVC or neoprene rubber gloves.
For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Skin and body protection : Wear chemical resistant gloves/gauntlets and boots. Where risk of splashing, also wear an apron.
Protective clothing approved to EU Standard EN14605.
Wear antistatic and flame-retardant clothing, if a local risk assessment deems it so.

Respiratory protection : If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation.
Check with respiratory protective equipment suppliers.
Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.
Where air-filtering respirators are suitable, select an appro-

priate combination of mask and filter.
If air-filtering respirators are suitable for conditions of use:
Select a filter suitable for organic gases and vapours [Type A boiling point > 65°C (149°F)] meeting EN14387.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	Light coloured
Odour	:	Hydrocarbon
Odour Threshold	:	Data not available
Melting / freezing point	:	Data not available
Boiling point/boiling range	:	Typical 149 - 213 °C
Flammability		
Flammability (solid, gas)	:	Not applicable
Lower explosion limit and upper explosion limit / flammability limit		
Upper explosion limit / upper flammability limit	:	upper flammability limit 6 %(V)
Lower explosion limit / Lower flammability limit	:	Lower flammability limit 0,6 %(V)
Flash point	:	Typical 40 - 46 °C
Auto-ignition temperature	:	230 - 270 °C Method: ASTM E-659
Decomposition temperature		
Decomposition temperature	:	Data not available
pH	:	Data not available
Viscosity		
Viscosity, dynamic	:	Data not available
Viscosity, kinematic	:	Typical 1,14 mm2/s (25 °C) Method: ASTM D445
Solubility(ies)		
Water solubility	:	insoluble

Solubility in other solvents	:	soluble Solvent: Hydrocarbon solvent(s)
Partition coefficient: n-octanol/water	:	log Pow: 5 - 6,7
Vapour pressure	:	300 Pa (20 °C)
Relative density	:	0,77 - 0,79 (15 °C) Method: ASTM D4052
Density	:	Typical 769 - 790 kg/m3 (15 °C) Method: ASTM D4052
Relative vapour density	:	4,8

9.2 Other information

Explosives	:	Not applicable
Oxidizing properties	:	Data not available
Evaporation rate	:	80 Method: DIN 53170, di-ethyl ether=1
Conductivity	:	Low conductivity: < 100 pS/m The conductivity of this material makes it a static accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10,000 pS/m., Whether a liquid is nonconductive or semi-conductive, the precautions are the same., A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid
Surface tension	:	24,5 mN/m, 20 °C, ASTM D-971
Molecular weight	:	143 g/mol

SECTION 10: Stability and reactivity

10.1 Reactivity

The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.

10.2 Chemical stability

No hazardous reaction is expected when handled and stored according to provisions
Stable under normal conditions of use.

10.3 Possibility of hazardous reactions

Hazardous reactions : Reacts with strong oxidising agents.

10.4 Conditions to avoid

Conditions to avoid : Avoid heat, sparks, open flames and other ignition sources.

In certain circumstances product can ignite due to static electricity.

10.5 Incompatible materials

Materials to avoid : Strong oxidising agents.

10.6 Hazardous decomposition products

Hazardous decomposition products are not expected to form during normal storage.
Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

SECTION 11: Toxicological information

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

Information on likely routes of exposure : Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion.

Acute toxicity

Product:

Acute oral toxicity : LD 50 (Rat, male and female): > 5.000 mg/kg
Method: Test(s) equivalent or similar to OECD Test Guideline 401
Remarks: Based on available data, the classification criteria are not met.

Acute inhalation toxicity : LC 50 (Rat, male and female): >2-<=10 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Test(s) equivalent or similar to OECD Test Guideline 403
Remarks: LC50 greater than near-saturated vapour concentration.
Based on available data, the classification criteria are not met.

Acute dermal toxicity : LD 50 (Rat, male and female): > 2.000 mg/kg
Method: Test(s) equivalent or similar to OECD Test Guideline 402
Remarks: Based on available data, the classification criteria are not met.

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Acute oral toxicity : LD 50 (Rat, male and female): > 5.000 mg/kg
Method: Test(s) equivalent or similar to OECD Test Guideline 401
Remarks: Based on available data, the classification criteria are not met.

Acute inhalation toxicity : LC 50 (Rat, male and female): >2-<=10 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Test(s) equivalent or similar to OECD Test Guideline 403
Remarks: LC50 greater than near-saturated vapour concentration.
Based on available data, the classification criteria are not met.

Acute dermal toxicity : LD 50 (Rat, male and female): > 2.000 mg/kg
Method: Test(s) equivalent or similar to OECD Test Guideline 402
Remarks: Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Product:

Species : Rabbit
Method : OECD Test Guideline 404
Remarks : Causes skin irritation.
Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Species : Rabbit
Method : OECD Test Guideline 404
Remarks : Causes skin irritation.
Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.

Serious eye damage/eye irritation

Product:

Species : Rabbit
Method : OECD Test Guideline 405
Remarks : Slightly irritating.
Insufficient to classify.

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Remarks	:	Slightly irritating. Insufficient to classify. Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Product:

Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Remarks	:	Based on available data, the classification criteria are not met.

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Remarks	:	Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Product:

Genotoxicity in vitro	:	Method: Test(s) equivalent or similar to OECD Guideline 471 Remarks: Based on available data, the classification criteria are not met. Method: Test(s) equivalent or similar to OECD Test Guideline 473 Remarks: Based on available data, the classification criteria are not met. Method: Test(s) equivalent or similar to OECD Test Guideline 476 Remarks: Based on available data, the classification criteria are not met.
Genotoxicity in vivo	:	Species: Mouse Method: Test(s) equivalent or similar to OECD Test Guideline 474 Remarks: Based on available data, the classification criteria are not met.
Germ cell mutagenicity- Assessment	:	This product does not meet the criteria for classification in categories 1A/1B.

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Genotoxicity in vitro	:	Method: Test(s) equivalent or similar to OECD Guideline 471 Remarks: Based on available data, the classification criteria are not met. Method: Test(s) equivalent or similar to OECD Test Guideline 473 Remarks: Based on available data, the classification criteria are not met. Method: Test(s) equivalent or similar to OECD Test Guideline 476 Remarks: Based on available data, the classification criteria are not met.
Genotoxicity in vivo	:	Species: Mouse Method: Test(s) equivalent or similar to OECD Test Guideline 474 Remarks: Based on available data, the classification criteria are not met.
Germ cell mutagenicity- Assessment	:	This product does not meet the criteria for classification in categories 1A/1B.

Carcinogenicity

Product:

Species	:	Rat, male and female
Application Route	:	Inhalation
Method	:	Test(s) equivalent or similar to OECD Test Guideline 453
Remarks	:	Weight of evidence does not support classification as a carcinogen
Species	:	Mouse, male and female
Application Route	:	Inhalation
Method	:	Test(s) equivalent or similar to OECD Test Guideline 453
Remarks	:	Weight of evidence does not support classification as a carcinogen
Carcinogenicity - Assessment	:	This product does not meet the criteria for classification in categories 1A/1B.

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Species	:	Rat, male and female
Application Route	:	Inhalation
Method	:	Test(s) equivalent or similar to OECD Test Guideline 453
Remarks	:	Weight of evidence does not support classification as a car-

cinogen

Species	:	Mouse, male and female
Application Route	:	Inhalation
Method	:	Test(s) equivalent or similar to OECD Test Guideline 453
Remarks	:	Weight of evidence does not support classification as a carcinogen
Carcinogenicity - Assessment	:	This product does not meet the criteria for classification in categories 1A/1B.

Material	GHS/CLP Carcinogenicity Classification
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	No carcinogenicity classification.

Reproductive toxicity

Product:

Effects on fertility	:	Species: Rat Sex: male and female Application Route: Oral Method: Equivalent or similar to OECD Test Guideline 416 Remarks: Based on available data, the classification criteria are not met.
Reproductive toxicity - Assessment	:	This product does not meet the criteria for classification in categories 1A/1B.

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Effects on fertility	:	Species: Rat Sex: male and female Application Route: Oral Method: Equivalent or similar to OECD Test Guideline 416 Remarks: Based on available data, the classification criteria are not met.
Reproductive toxicity - Assessment	:	This product does not meet the criteria for classification in categories 1A/1B.

STOT - single exposure

Product:

Exposure routes	:	Inhalation

Target Organs : Central nervous system
Remarks : May cause drowsiness or dizziness.

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Exposure routes : Inhalation
Target Organs : Central nervous system
Remarks : May cause drowsiness or dizziness.

STOT - repeated exposure

Product:

Remarks : Based on available data, the classification criteria are not met.

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Remarks : Based on available data, the classification criteria are not met.

Repeated dose toxicity

Product:

Species : Rat, male and female
Application Route : Oral
Method : Test(s) equivalent or similar to OECD Test Guideline 408
Target Organs : No specific target organs noted

Species : Rat, male and female
Application Route : Inhalation
Test atmosphere : vapour
Method : Test(s) equivalent or similar to OECD Test Guideline 413
Target Organs : No specific target organs noted

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Species : Rat, male and female
Application Route : Oral
Method : Test(s) equivalent or similar to OECD Test Guideline 408
Target Organs : No specific target organs noted

Species : Rat, male and female
Application Route : Inhalation
Test atmosphere : vapour
Method : Test(s) equivalent or similar to OECD Test Guideline 413
Target Organs : No specific target organs noted

Aspiration toxicity

Product:

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

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

Further information

Product:

Remarks : Classifications by other authorities under varying regulatory frameworks may exist.

Remarks : Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Remarks : Classifications by other authorities under varying regulatory frameworks may exist.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1.000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Not toxic at limit of water solubility:

Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): > 1.000 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: Not toxic at limit of water solubility:
Toxicity to algae/aquatic plants	:	EL50 (Pseudokirchneriella subcapitata (algae)): > 1.000 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility
Toxicity to fish (Chronic toxicity)	:	Remarks: Data not available
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	Remarks: Data not available
Toxicity to microorganisms	:	Remarks: Data not available

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): > 1.000 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Not toxic at limit of water solubility:
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): > 1.000 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: Not toxic at limit of water solubility:
Toxicity to algae/aquatic plants	:	EL50 (Pseudokirchneriella subcapitata (algae)): > 1.000 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility
Toxicity to microorganisms	:	Remarks: Data not available
Toxicity to fish (Chronic toxicity)	:	Remarks: Data not available
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	Remarks: Data not available

12.2 Persistence and degradability

Product:

Biodegradability : Biodegradation: 80 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Readily biodegradable.
Oxidises rapidly by photo-chemical reactions in air.

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Biodegradability : Biodegradation: 80 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Readily biodegradable.
Oxidises rapidly by photo-chemical reactions in air.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Has the potential to bioaccumulate.

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Bioaccumulation : Remarks: Has the potential to bioaccumulate.

12.4 Mobility in soil

Product:

Mobility : Remarks: Floats on water., If it enters soil, it will adsorb to soil particles and will not be mobile.

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Mobility : Remarks: Floats on water., If it enters soil, it will adsorb to soil particles and will not be mobile.

12.5 Results of PBT and vPvB assessment

Product:

Assessment : The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB..

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Assessment : The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not consid-

ered to be PBT or vPvB..

12.6 Endocrine disrupting properties

Product:

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

12.7 Other adverse effects

Product:

Additional ecological information : In view of the high rate of loss from solution, the product is unlikely to pose a significant hazard to aquatic life.
Does not have ozone depletion potential.

Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Additional ecological information : In view of the high rate of loss from solution, the product is unlikely to pose a significant hazard to aquatic life.
Does not have ozone depletion potential.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Recover or recycle if possible.
It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.
Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment.
Do not dispose into the environment, in drains or in water courses.
Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination.
Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.

Waste, spills or used product is dangerous waste.

Disposal should be in accordance with applicable regional, national, and local laws and regulations.
Local regulations may be more stringent than regional or national requirements and must be complied with.

MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.

Contaminated packaging : Drain container thoroughly.
After draining, vent in a safe place away from sparks and fire.
Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums.
Send to drum recoverer or metal reclaimer.
Comply with any local recovery or waste disposal regulations.

SECTION 14: Transport information

14.1 UN number or ID number

ADR : 1268

RID : 1268

IMDG : 1268

IATA : 1268

14.2 UN proper shipping name

ADR : PETROLEUM DISTILLATES, N.O.S.

RID : PETROLEUM DISTILLATES, N.O.S.

IMDG : PETROLEUM DISTILLATES, N.O.S.
(NAPHTHA)

IATA : Petroleum distillates, n.o.s.

14.3 Transport hazard class(es)

ADR : 3

RID : 3

IMDG : 3

IATA : 3

14.4 Packing group

ADR

Packing group	:	III
Classification Code	:	F1
Hazard Identification Number	:	30
Labels	:	3

RID

Packing group	:	III
Classification Code	:	F1
Hazard Identification Number	:	30
Labels	:	3

IMDG

Packing group	:	III
Labels	:	3

IATA

Packing group	:	III
Labels	:	3

14.5 Environmental hazards

ADR
Environmentally hazardous : no

RID
Environmentally hazardous : no

IMDG
Marine pollutant : no

14.6 Special precautions for user

Remarks : Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

14.7 Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

Additional Information **:** This product may be transported under nitrogen blanketing. Nitrogen is an odourless and invisible gas. Exposure to nitrogen enriched atmospheres displaces available oxygen which may cause asphyxiation or death. Personnel must observe strict safety precautions when involved with a confined space entry.

SECTION 15: Regulatory information

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

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	P5c	FLAMMABLE LIQUIDS

Volatile organic compounds : Volatile organic compounds (VOC) content: 100 %

Other regulations:

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Product is subject to Government Decree on the Monitoring of the Handling and Storage of Dangerous Chemicals 685/2015, based on Seveso III directive (2012/18/EU).

The national inventory is based on the CAS number 64742-48-9.

The components of this product are reported in the following inventories:

AIIC	:	Listed
DSL	:	Listed
IECSC	:	Listed
ENCS	:	Listed
KECI	:	Listed
PICCS	:	Listed
EINECS	:	Listed
TSCA	:	Listed
TCSI	:	Listed

15.2 Chemical safety assessment

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

SECTION 16: Other information

Full text of other abbreviations

EU HSPA	:	OEL based on European Hydrocarbon Solvents Producers (CEFIC-HSPA) methodology.
EU HSPA / TWA	:	Time-Weighted Average Concentration (TWA) (8 hrs.)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships car-

rying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Training advice	:	Provide adequate information, instruction and training for operators.
Other information	:	For Industry guidance and tools on REACH please visit the CEFIC website at http://cefic.org/Industry-support. The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB. A vertical bar (|) in the left margin indicates an amendment from the previous version.
Sources of key data used to compile the Safety Data Sheet	:	The quoted data are from, but not limited to, one or more sources of information (e.g. toxicological data from Shell Health Services, material suppliers' data, CONCAWE, EU IUCLID date base, EC 1272 regulation, etc).

Classification of the mixture:		**Classification procedure:**
Flam. Liq. 3	H226	On basis of test data.
Asp. Tox. 1	H304	Expert judgement and weight of evidence determination.
STOT SE 3	H336	Expert judgement and weight of evidence determination.

Identified Uses according to the Use Descriptor System
Uses - Worker
Title : Manufacture of substance- Industrial

Uses - Worker

Title	:	Distribution of substance- Industrial
Uses - Worker		
Title	:	Formulation & (re)packing of substances and mixtures- Industrial
Uses - Worker		
Title	:	Uses in Coatings- Industrial
Uses - Worker		
Title	:	Uses in Coatings- Professional
Uses - Worker		
Title	:	Use in Cleaning Agents- Industrial
Uses - Worker		
Title	:	Use in Cleaning Agents- Professional
Uses - Worker		
Title	:	Lubricants- Industrial
Uses - Worker		
Title	:	Lubricants- Professional
Uses - Worker		
Title	:	Metal working fluids / rolling oils- Industrial
Uses - Worker		
Title	:	Metal working fluids / rolling oils- Professional
Uses - Worker		
Title	:	Use as binders and release agents- Industrial
Uses - Worker		
Title	:	Use as binders and release agents- Professional
Uses - Worker		
Title	:	Use as a fuel- Industrial
Uses - Worker		
Title	:	Use as a fuel- Professional
Uses - Worker		
Title	:	Functional Fluids- Industrial
Uses - Worker		
Title	:	Functional Fluids- Professional
Uses - Worker		
Title	:	Road and construction applications- Professional
Uses - Worker		
Title	:	Use in laboratories- Industrial

Uses - Worker
Title : Use in laboratories- Professional

Uses - Worker
Title : Water treatment chemicals- Industrial

Uses - Worker
Title : Water treatment chemicals- Professional

Uses - Worker
Title : Polymer processing- Industrial

Uses - Worker
Title : Polymer processing- Professional

Identified Uses according to the Use Descriptor System

Uses - Consumer
Title : Uses in Coatings
- Consumer

Uses - Consumer
Title : Use in Cleaning Agents
- Consumer

Uses - Consumer
Title : Lubricants
- Consumer

Uses - Consumer
Title : Use as a fuel
- Consumer

Uses - Consumer
Title : Functional Fluids
- Consumer

Uses - Consumer
Title : Other Consumer Uses
- Consumer

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

Exposure Scenario - Worker

300000000944	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Manufacture of substance- Industrial
Use Descriptor	**Sector of Use**: SU3, SU8, SU9 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 15 **Environmental Release Categories**: ERC1, ERC4, ESVOC SpERC 1.1.v1
Scope of process	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.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	

Contributing Scenarios	**Risk Management Measures**
General exposures (closed systems)PROC1PROC2PROC3	No other specific measures identified.
General exposures (open systems)PROC4	No other specific measures identified.
Process samplingPROC8b	No other specific measures identified.
Laboratory activitiesPROC15	No other specific measures identified.
Bulk transfers(open systems)PROC8b	No other specific measures identified.
Bulk transfers(closed systems)PROC8b	No other specific measures identified.
Equipment cleaning and maintenancePROC8a	No other specific measures identified.
Storage.PROC1PROC2	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**
No exposure assessment presented for the environment.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000945	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Distribution of substance- Industrial
Use Descriptor	**Sector of Use**: SU3, SU8, SU9 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9, PROC 15 **Environmental Release Categories**: ERC1, ERC2, ERC3, ERC4, ERC5, ERC6a, ERC6b, ERC 6C,, ERC7, ESVOC SpERC 1.1b.v1
Scope of process	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.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	

Contributing Scenarios	**Risk Management Measures**
General exposures (closed systems)PROC1PROC2PROC3	No other specific measures identified.
General exposures (open systems)PROC4	No other specific measures identified.
Process samplingPROC3	No other specific measures identified.
Laboratory activitiesPROC15	No other specific measures identified.
Bulk transfers(closed systems)PROC8b	No other specific measures identified.
Bulk transfers(open systems)PROC8b	No other specific measures identified.
Drum and small package fillingPROC9	No other specific measures identified.
Equipment cleaning and	No other specific measures identified.

maintenancePROC8a	
Storage.PROC1PROC2	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000947	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Formulation & (re)packing of substances and mixtures- Industrial
Use Descriptor	**Sector of Use**: SU3, SU10 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 5, PROC 8a, PROC 8b, PROC 9, PROC 14, PROC 15 **Environmental Release Categories**: ERC2, ESVOC SpERC 2.2.v1
Scope of process	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.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General exposures (closed systems)PROC1PROC2PROC3	No other specific measures identified.
General exposures (open systems)PROC4	No other specific measures identified.
Batch processes at elevated temperaturesUse in contained batch processesOperation is carried out at elevated temperature (> 20°C above ambient temperature).PROC3	No other specific measures identified.
Process samplingPROC3	No other specific measures identified.
Laboratory activitiesPROC15	No other specific measures identified.

Bulk transfersDedicated facility PROC8b	No other specific measures identified.
Mixing operations (open systems)PROC5	No other specific measures identified.
ManualTransfer from/pouring from containersNon-dedicated facilityPROC8a	No other specific measures identified.
Drum/batch transfersDedicated facilityPROC8b	No other specific measures identified.
Production or preparation or articles by tabletting, compression, extrusion or pelletisationPROC14	No other specific measures identified.
Drum and small package fillingPROC9	No other specific measures identified.
Equipment cleaning and maintenancePROC8a	No other specific measures identified.
Storage.PROC1PROC2	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000948	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Uses in Coatings- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 5, PROC 7, PROC 8a, PROC 8b, PROC 9, PROC 10, PROC 13, PROC 14, PROC 15 **Environmental Release Categories**: ERC4, ESVOC SpERC 4.3a.v1
Scope of process	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.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General exposures (closed systems)PROC1	No other specific measures identified.
General exposures (closed systems)with sample collectionUse in contained systemsPROC2	No other specific measures identified.
Film formation - force drying, stoving and other technologies.Use in contained systemselevated temperatureOperation is carried out at elevated temperature (> 20°C above ambient tem-	No other specific measures identified.

perature).PROC2	
Mixing operations (closed systems)Use in contained batch processesPROC3	No other specific measures identified.
Film formation - air drying(open systems)PROC4	No other specific measures identified.
Preparation of material for applicationMixing operations (open systems)PROC5	No other specific measures identified.
Spraying (automatic/robotic)PROC7	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
ManualSprayingPROC7	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Material transfersNon-dedicated facilityPROC8a	No other specific measures identified.
Material transfersDedicated facilityPROC8b	No other specific measures identified.
Roller, spreader, flow applicationPROC10	No other specific measures identified.
Dipping, immersion and pouringPROC13	No other specific measures identified.
Laboratory activitiesPROC15	No other specific measures identified.
Material transfersDrum/batch transfersTransfer from/pouring from containersPROC9	No other specific measures identified.
Production or preparation or articles by tabletting, compression, extrusion or pelletisationPROC14	No other specific measures identified.
Equipment cleaning and maintenancePROC8a	No other specific measures identified.
Storage.PROC1	Store substance within a closed system.
Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE**

	EXPOSURE SCENARIO
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000949	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Uses in Coatings- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 5, PROC 8a, PROC 8b, PROC 10, PROC 11, PROC 13, PROC 15, PROC 19 **Environmental Release Categories**: ERC8a, ERC8d, ESVOC SpERC 8.3c.v1
Scope of process	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.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General exposures (closed systems)PROC1	No other specific measures identified.
Filling/ preparation of equipment from drums or containers.Use in contained systemsPROC2	No other specific measures identified.
General exposures (closed systems)Use in contained systemsPROC2	No other specific measures identified.
Preparation of material for applicationUse in contained batch processesPROC3	No other specific measures identified.
Film formation - air dry-	No other specific measures identified.

ingOutdoorPROC4	
Film formation - air dry-ingIndoorPROC4	No other specific measures identified.
Preparation of material for applicationIndoorPROC5	No other specific measures identified.
Preparation of material for applicationOutdoorPROC5	No other specific measures identified.
Material trans-fersIndoorDrum/batch transfersNon-dedicated facilityPROC8a	No other specific measures identified.
Material trans-fersDrum/batch trans-fersDedicated facili-tyPROC8b	No other specific measures identified.
Roller, spreader, flow appli-cationPROC10	No other specific measures identified.
ManualSprayingPROC11	Wear suitable gloves tested to EN374. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying.
Dipping, immersion and pouringPROC13	No other specific measures identified.
Laboratory activi-tiesPROC15	No other specific measures identified.
Hand application - finger-paints, pastels, adhe-sivesPROC19	No other specific measures identified.
Equipment cleaning and maintenancePROC8a	No other specific measures identified.
Storage.PROC1	Store substance within a closed system.
Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000951	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in Cleaning Agents- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 7, PROC 8a, PROC 8b, PROC 10, PROC 13 **Environmental Release Categories**: ERC4, ESVOC SpERC 4.4a.v1
Scope of process	Covers the use as a component of cleaning products including transfer from storage, pouring/unloading from drums or containers. 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.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
Bulk transfersNon-dedicated facilityPROC8a	No specific measures identified.
Bulk transfersDedicated facilityPROC8b	No specific measures identified.
Automated process with (semi) closed systems.Use in contained systemsPROC2	No specific measures identified.
Automated process with (semi) closed systems.Drum/batch transfersPROC3	No specific measures identified.
Application of cleaning products in closed systemsPROC2	No specific measures identified.
Filling/ preparation of equipment from drums or contain-	No specific measures identified.

ers.PROC8b	
Use in contained batch process-esPROC4	No specific measures identified.
Degreasing small objects in cleaning stationPROC13	No specific measures identified.
Cleaning with low-pressure wash-ersPROC10	No specific measures identified.
Cleaning with high pressure washersPROC7	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
ManualSurfacesCleaningPROC10	No specific measures identified.
Storage.PROC1	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000952	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in Cleaning Agents- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 10, PROC 11, PROC 13, PROC19 **Environmental Release Categories**: ERC8a, ERC8d, ESVOC SpERC 8.4b.v1
Scope of process	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).

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	

Contributing Scenarios	**Risk Management Measures**
Filling/ preparation of equipment from drums or containers.Dedicated facilityPROC8b	No other specific measures identified.
Filling/ preparation of equipment from drums or containers.Non-dedicated facilityPROC8a	No other specific measures identified.
Automated process with (semi) closed systems.Use in contained systemsPROC2	No other specific measures identified.
Automated process with (semi) closed systems.Drum/batch transfersUse in contained systemsPROC3	No other specific measures identified.
Semi Automated process. (e.g.: Semi automatic application of floor care and maintenance products)PROC4	No other specific measures identified.

ManualSurfacesCleaningDipping, immersion and pouringPROC13	No other specific measures identified.
Cleaning with low-pressure washers-Rolling, Brushingno sprayingPROC10	No other specific measures identified.
Cleaning with high pressure washers-SprayingPROC11	Wear suitable gloves tested to EN374. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying.
ManualSurfacesCleaningSprayingPROC10	No other specific measures identified.
Ad hoc manual application via trigger sprays, dipping, etc.Rolling, BrushingPROC10	No other specific measures identified.
Application of cleaning products in closed systemsPROC4	No other specific measures identified.
Hand-mixing with intimate contact and only PPE availablePROC19	No other specific measures identified.
Storage.PROC1	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000953	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Lubricants- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 7, PROC 8a, PROC 8b, PROC 9, PROC 10, PROC 13, PROC 17, PROC 18 **Environmental Release Categories**: ERC4, ERC7, ESVOC SpERC 4.6a.v1
Scope of process	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.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	

Contributing Scenarios	**Risk Management Measures**
General exposures (closed systems)PROC1PROC2PROC3	No other specific measures identified.
General exposures (open systems)PROC4	No other specific measures identified.
Bulk transfersDedicated facilityPROC8b	No other specific measures identified.
Filling/ preparation of equipment from drums or containers.Non-dedicated facilityPROC8a	No other specific measures identified.
Filling/ preparation of equipment from drums or containers.Dedicated facilityPROC8b	No other specific measures identified.
Initial factory fill of equipmentDedicated facilityPROC9	No other specific measures identified.
Operation and lubrication of	No other specific measures identified.

high energy open equip-mentPROC17PROC18	
ManualRolling, Brush-ingPROC10	No other specific measures identified.
Treatment by dipping and pour-ingPROC13	No other specific measures identified.
SprayingPROC7	Wear suitable gloves tested to EN374. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying.
Maintenance (of larger plant items) and machine set upDedi-cated facilityPROC8b	No other specific measures identified.
Maintenance (of larger plant items) and machine set upDedi-cated facilityOperation is carried out at elevated temperature (> 20°C above ambient tempera-ture).PROC8b	No other specific measures identified.
Maintenance of small itemsNon-dedicated facilityPROC8a	No other specific measures identified.
Remanufacture of reject arti-clesPROC9	No other specific measures identified.
Storage.PROC1PROC2	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**

Section 3.1 - Health

The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated

Section 3.2 -Environment

No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**

Section 4.1 - Health

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.

Section 4.2 -Environment

No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000954	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Lubricants- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9, PROC 10, PROC 11, PROC 13, PROC 17, PROC 18, PROC 20 **Environmental Release Categories**: ERC8a, ERC8d, ERC9a, ERC9b, ESVOC SpERC 8.6c.v1, ESVOC SpERC 9.6b.v1
Scope of process	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.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General exposures (closed systems)PROC1PROC2PROC3	No other specific measures identified.
Operation of equipment containing engine oils and similar.PROC20	No other specific measures identified.
General exposures (open systems)PROC4	No other specific measures identified.
Bulk transfersDedicated facilityPROC8b	No other specific measures identified.
Filling/ preparation of equipment from drums or containers.Dedicated facilityPROC8b	No other specific measures identified.
Filling/ preparation of equipment from drums or containers.Non-dedicated facilityPROC8a	No other specific measures identified.

Operation and lubrication of high energy open equipmentIn-doorPROC17PROC18	No other specific measures identified.
Operation and lubrication of high energy open equipmentOut-doorPROC17	No other specific measures identified.
Maintenance (of larger plant items) and machine set upDedicated facilityPROC8b	No other specific measures identified.
Maintenance (of larger plant items) and machine set upDedicated facilityOperation is carried out at elevated temperature (> 20°C above ambient tempera-ture).PROC8b	No other specific measures identified.
Maintenance of small itemsNon-dedicated facilityOperation is car-ried out at elevated temperature (> 20°C above ambient tempera-ture).PROC8a	No other specific measures identified.
Engine lubricant servicePROC9	No other specific measures identified.
ManualRolling, BrushingPROC10	No other specific measures identified.
SprayingPROC11	Wear suitable gloves tested to EN374. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol re-lease, e.g. spraying.
Treatment by dipping and pour-ingPROC13	No other specific measures identified.
Storage.PROC1PROC2	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000956	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Metal working fluids / rolling oils- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 5, PROC 7, PROC 8a, PROC 8b, PROC 9, PROC 10, PROC 13, PROC 17 **Environmental Release Categories**: ERC4, ESVOC SpERC 4.7a.v1
Scope of process	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.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	

Contributing Scenarios	**Risk Management Measures**
General exposures (closed systems)PROC1PROC2PROC3	No other specific measures identified.
General exposures (open systems)PROC4	No other specific measures identified.
Bulk transfersDedicated facilityPROC8b	No other specific measures identified.
Filling/ preparation of equipment from drums or containers.Dedicated facilityPROC5PROC8bPROC9	No other specific measures identified.
Process samplingPROC8b	No other specific measures identified.
Metal machining opera-	No other specific measures identified.

tionsPROC17	
Treatment by dipping and pouringPROC13	No other specific measures identified.
SprayingPROC7	Wear suitable gloves tested to EN374. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying.
ManualRolling, BrushingPROC10	No other specific measures identified.
Automated metal rolling/formingUse in contained systemsOperation is carried out at elevated temperature (> 20°C above ambient temperature).PROC2	No other specific measures identified.
Semi-automated metal rolling/formingOperation is carried out at elevated temperature (> 20°C above ambient temperature).PROC4PROC17	No other specific measures identified.
Equipment cleaning and maintenanceDedicated facilityPROC8b	No other specific measures identified.
Equipment cleaning and maintenanceNon-dedicated facilityPROC8a	No other specific measures identified.
Storage.PROC1PROC2	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000958	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Metal working fluids / rolling oils- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 5, PROC 8a, PROC 8b, PROC 9, PROC 10, PROC 11, PROC 13, PROC 17 **Environmental Release Categories**: ERC8a, ERC8d, ESVOC SpERC 8.7c.v1
Scope of process	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.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General exposures (closed systems)PROC1PROC2PROC3	No other specific measures identified.
Bulk transfersDedicated facilityPROC8b	No other specific measures identified.
Filling/ preparation of equipment from drums or containers.Dedicated facilityPROC8bPROC9	No other specific measures identified.
Filling/ preparation of equipment from drums or containers.Non-dedicated facilityPROC5PROC8a	No other specific measures identified.
Process samplingPROC8b	No other specific measures identified.

Metal machining operationsPROC17	No other specific measures identified.
ManualRolling, BrushingPROC10	No other specific measures identified.
SprayingIndoorOutdoorPROC11	Wear suitable gloves tested to EN374. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying.
Treatment by dipping and pouringPROC13	No other specific measures identified.
Equipment cleaning and maintenanceNon-dedicated facilityPROC8a	No other specific measures identified.
Equipment cleaning and maintenanceDedicated facilityPROC8b	No other specific measures identified.
Storage.PROC1PROC2	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000955	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use as binders and release agents- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 6, PROC 7, PROC 8a, PROC 8b, PROC 10, PROC 13, PROC 14 **Environmental Release Categories**: ERC4, ESVOC SpERC 4.10a.v1
Scope of process	Covers the use as binders and release agents including material transfers, mixing, application (including spraying and brushing), and handling of waste.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
Material transfers(closed systems)PROC1PROC2PROC3	No other specific measures identified.
Drum/batch transfersDedicated facilityPROC8b	No other specific measures identified.
Mixing operations (closed systems)PROC3	No other specific measures identified.
Mixing operations (open systems)PROC4	No other specific measures identified.
Mold formingPROC14	No other specific measures identified.
Casting operations(open systems)Operation is carried out at elevated temperature (> 20°C above ambient temperature).Aerosol generation due to elevated process temperature-	No other specific measures identified.

PROC6	
SprayingMachinePROC7	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
SprayingManualPROC7	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
ManualRolling, Brush-ingPROC10	No other specific measures identified.
Dipping, immersion and pour-ingPROC13	No other specific measures identified.
Equipment cleaning and maintenancePROC8a	No other specific measures identified.
Storage.PROC1PROC2	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000959	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use as binders and release agents- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 6, PROC 8a, PROC 8b, PROC 10, PROC 11, PROC 14 **Environmental Release Categories**: ERC8a, ERC8d, ESVOC SpERC 8.10b.v1
Scope of process	Covers the use as binders and release agents including material transfers, mixing, application by spraying, brushing, and handling of waste.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
Material transfers(closed systems)PROC1PROC2PROC3	No other specific measures identified.
Drum/batch transfersDedicated facilityPROC8b	No other specific measures identified.
Drum/batch transfersNon-dedicated facilityPROC8a	No other specific measures identified.
Mixing operations (closed systems)PROC3	No other specific measures identified.
Mixing operations (open systems)PROC4	No other specific measures identified.
Mold formingPROC14	No other specific measures identified.
Casting operations(open systems)Operation is carried out at elevated temperature (> 20°C above ambient tempera-	No other specific measures identified.

ture).PROC6	
SprayingMachinePROC11	Wear suitable gloves tested to EN374. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying.
SprayingManualPROC11	Wear suitable gloves tested to EN374. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying.
ManualRolling, Brush-ingPROC10	No other specific measures identified.
Storage.PROC1PROC2	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000960	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use as a fuel- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 8a, PROC 8b, PROC 16 **Environmental Release Categories**: ERC7, ESVOC SpERC 7.12a.v1
Scope of process	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
Bulk transfersDedicated facilityPROC8b	No other specific measures identified.
Drum/batch transfersDedicated facilityPROC8b	No other specific measures identified.
General exposures (closed systems)PROC1PROC2PROC3	No other specific measures identified.
Use as a fuel(closed systems)PROC16	No other specific measures identified.
Equipment cleaning and maintenancePROC8a	No other specific measures identified.
Storage.PROC1PROC2	Store substance within a closed system.
Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless	

otherwise indicated

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000961	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use as a fuel- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 8a, PROC 8b, PROC 16 **Environmental Release Categories**: ERC9a, ERC9b, ESVOC SpERC 9.12b.v1
Scope of process	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	

Contributing Scenarios	**Risk Management Measures**
Bulk transfersDedicated facilityPROC8b	No other specific measures identified.
Drum/batch transfersDedicated facilityPROC8b	No other specific measures identified.
Refueling.Dedicated facilityPROC8b	No other specific measures identified.
General exposures (closed systems)PROC1PROC2PROC3	No other specific measures identified.
Use as a fuel(closed systems)PROC16	No other specific measures identified.
Equipment cleaning and maintenancePROC8a	No other specific measures identified.
Storage.PROC1PROC2	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**

Section 3.1 - Health
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000962	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Functional Fluids- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9 **Environmental Release Categories**: ERC7, ESVOC SpERC 7.13a.v1
Scope of process	Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in industrial equipment including maintenance and related material transfers.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	

Contributing Scenarios	**Risk Management Measures**
Bulk transfers(closed systems)PROC1PROC2PROC3	No other specific measures identified.
Drum/batch transfersDedicated facilityPROC8b	No other specific measures identified.
Filling of articles/equipment(closed systems)PROC9	No other specific measures identified.
Filling/ preparation of equipment from drums or containers.Non-dedicated facilityPROC8a	No other specific measures identified.
General exposures (closed systems)PROC2PROC3	No other specific measures identified.
General exposures (open systems)PROC4	No other specific measures identified.
General exposures (open systems)elevated temperature-PROC4	No other specific measures identified.

Remanufacture of reject arti-clesPROC9	No other specific measures identified.
Equipment maintenance-PROC8a	No other specific measures identified.
Storage.PROC1PROC2	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000964	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Functional Fluids- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 8a, PROC 9, PROC 20 **Environmental Release Categories**: ERC9a, ERC9b, ESVOC SpERC 9.13b.v1
Scope of process	Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in professional equipment including maintenance and related material transfers.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	

Contributing Scenarios	**Risk Management Measures**
Transfer from/pouring from containersPROC9	No other specific measures identified.
Filling/ preparation of equipment from drums or containers.PROC9	No other specific measures identified.
General exposures (closed systems)PROC1PROC2PROC3	No other specific measures identified.
Operation of equipment containing engine oils and similar.(closed systems)PROC20	No other specific measures identified.
Operation of equipment containing engine oils and similar.(closed systems)Operation is carried out at elevated temperature (> 20°C above ambient temperature).PROC20	No other specific measures identified.
Remanufacture of reject arti-	No other specific measures identified.

clesPROC9	
Equipment maintenance-PROC8a	No other specific measures identified.
Storage.PROC1PROC2	Store substance within a closed system.

Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000967	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Road and construction applications- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC 8a, PROC 8b, PROC 9, PROC 10, PROC 11, PROC 13 **Environmental Release Categories**: ERC8d, ERC8f, ESVOC SpERC 8.15.v1
Scope of process	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.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
Drum/batch transfersNon-dedicated facilityPROC8a	No other specific measures identified.
Material transfersDedicated facilityPROC8b	No other specific measures identified.
Small scale weighingPROC9	No other specific measures identified.
ManualRolling, BrushingPROC10	No other specific measures identified.
Spraying/ fogging by machine applicationPROC11	Wear suitable gloves tested to EN374. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying.
Dipping, immersion and pouringPROC13	No other specific measures identified.
Equipment cleaning and	No other specific measures identified.

maintenancePROC8a	
Storage.PROC1PROC2	Store substance within a closed system.
Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000968	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in laboratories- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC 15 **Environmental Release Categories**: ERC2, ERC4
Scope of process	Use of the substance within laboratory settings, including material transfers and equipment cleaning.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
Laboratory activi-tiesPROC15	No other specific measures identified.
Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000969	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in laboratories- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC 15 **Environmental Release Categories**: ERC8a, ESVOC SpERC 8.17.v1
Scope of process	Use of small quantities within laboratory settings, including material transfers and equipment cleaning.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
Laboratory activiti-esPROC15	No other specific measures identified.
Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000971	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Water treatment chemicals- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 13 **Environmental Release Categories**: ERC3, ERC4, ESVOC SpERC 3.22a.v1
Scope of process	Covers the use of the substance for the treatment of water at industrial facilities in open and closed systems.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
Bulk transfersUse in contained systemsPROC2	No other specific measures identified.
Drum/batch transfersDedicated facilityPROC8b	No other specific measures identified.
General exposures (closed systems)PROC3	No other specific measures identified.
General exposures (open systems)PROC4	No other specific measures identified.
Pouring from small containersPROC13	No other specific measures identified.
Equipment maintenance-PROC8a	No other specific measures identified.
Storage.PROC1	Store substance within a closed system.
Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	

The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated

Section 3.2 -Environment

No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**

Section 4.1 - Health

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.

Section 4.2 -Environment

No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000972	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Water treatment chemicals- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 13 **Environmental Release Categories**: ERC8f, ESVOC SpERC 8.22b.v1
Scope of process	Covers the use of the substance for the treatment of water in open and closed systems.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
Drum/batch transfersDedicated facilityPROC8b	No other specific measures identified.
General exposures (closed systems)PROC2PROC3	No other specific measures identified.
General exposures (open systems)PROC4	No other specific measures identified.
Pouring from small containersPROC13	No other specific measures identified.
Equipment maintenance-PROC8a	No other specific measures identified.
Storage.PROC1	Store substance within a closed system.
Section 2.2	**Control of Environmental Exposure**

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000010000	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Polymer processing- Industrial
Use Descriptor	**Sector of Use**: SU3, SU10 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 5, PROC 6, PROC 8a, PROC 8b, PROC 9, PROC 13, PROC 14, PROC 21 **Environmental Release Categories**: ERC4, ESVOC SpERC 4.21a.v1
Scope of process	Processing of formulated polymers including material transfers, additives handling (e.g. pigments, stabilisers, fillers, plasticisers, etc.), moulding, curing and forming activities, material re-works, storage and associated maintenance.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
Bulk transfers(closed systems)PROC1PROC2	No other specific measures identified.
Bulk transfersDedicated facilityPROC8b	No other specific measures identified.
Bulk weighing(closed systems)PROC1PROC2	No other specific measures identified.
Small scale weighingPROC9	No other specific measures identified.
Additive premixingUse in contained batch processesPROC3	No other specific measures identified.
Additive premixingPROC4PROC5	No other specific measures identified.
Calendering (including Banburys)Operation is car-	No other specific measures identified.

ried out at elevated temperature (> 20°C above ambient temperature).PROC6	
Production of articles by dipping and pouringPROC13	No other specific measures identified.
Extrusion and masterbatchingPROC14	No other specific measures identified.
Injection moulding of articlesPROC14	No other specific measures identified.
Finishing operationsPROC21	No other specific measures identified.
Equipment maintenancePROC8a	No other specific measures identified.
Storage.PROC1PROC2	Store substance within a closed system.
Section 2.2	**Control of Environmental Exposure**
No exposure assessment presented for the environment.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000010120	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Polymer processing- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC 1, PROC 2, PROC 6, PROC 8a, PROC 8b, PROC 14, PROC 21 **Environmental Release Categories**: ERC8a, ERC8d, ESVOC SpERC 8.21b.v1
Scope of process	Processing of formulated polymers including material transfers, additives handling (e.g. pigments, stabilisers, fillers, plasticisers, etc.), moulding, curing and forming activities, material re-works, storage and associated maintenance.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
Bulk transfers(closed systems)PROC1PROC2	No other specific measures identified.
Material transfersDedicated facilityPROC8b	No other specific measures identified.
Injection moulding of articlesPROC6PROC14	No other specific measures identified.
Finishing operationsPROC21	No other specific measures identified.
Equipment maintenance-PROC8a	No other specific measures identified.
Storage.PROC1PROC2	Store substance within a closed system.
Section 2.2	**Control of Environmental Exposure**
No exposure assessment presented for the environment.	

SECTION 3	**EXPOSURE ESTIMATION**

Section 3.1 - Health
The ECETOC TRA Version 3 tool has been used to estimate workplace exposures unless otherwise indicated

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Consumer

300000001163	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Uses in Coatings - Consumer
Use Descriptor	**Sector of Use**: SU21 **Product Categories**: PC1, PC4, PC8 (excipient only), PC9a, PC9b, PC9c, PC15, PC18, PC24, PC31, PC34 **Environmental Release Categories**: ERC8a, ERC8d, ESVOC SpERC 8.3c.v1
Scope of process	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.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**	
Section 2.1	**Control of Consumer Exposure**	
Product Characteristics		
Physical form of product	Liquid, vapour pressure > 10 Pa	
Concentration of the Substance in Mixture/Article	Unless stated otherwise.	
	Covers concentration up to (%): 100 %	
Amounts Used		
Unless stated otherwise.		
for each use event, covers amount up to (g):		37.500
covers skin contact area (cm2):		6.600
Frequency and Duration of Use		
Unless stated otherwise.		
Covers use up to (days/year):		365
covers use up to (times/day of use):		4
Exposure (hours/event):		8
Other Operational Conditions affecting Exposure		
Unless stated otherwise. Covers use at ambient temperatures. Covers use in room size of 20m3 Covers use under typical household ventilation.		
Product Categories	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**	
Adhesives, sealants Glues, hobby use.	Covers concentrations up to 30 %	
	covers use up to 365 day/year	
	covers use up to 1 times/day of use	
	covers skin contact area up to (cm2): 35,73 cm2	
	For each use event, covers amount up to 9 g	
	Covers use under typical household ventilation.	

	Covers use in room size of 20 m3
	Covers exposure up to 4 hours/event
Adhesives, sealants Glues DIY-use (carpet glue, tile glue, wood parquet glue).	Covers concentrations up to 30 %
	covers use up to 1 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 110,00 cm2
	For each use event, covers amount up to 6.390 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 6,00 hours/event
Adhesives, sealants Glue from spray.	Covers concentrations up to 30 %
	covers use up to 6 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 35,73 cm2
	For each use event, covers amount up to 85,05 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 4,00 hours/event
Adhesives, sealants Sealants.	Covers concentrations up to 30 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 35,73 cm2
	For each use event, covers amount up to 75 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 1,00 hours/event
Anti-Freeze and de-icing products Washing car window.	Covers concentrations up to 1 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	For each use event, covers amount up to 0,5 g
	Covers use in a one car garage (34 m3) under typical ventilation.
	Covers use in room size of 34 m3
	Covers exposure up to 0,02 hours/event
Anti-Freeze and de-icing products Pouring into radiator.	Covers concentrations up to 10 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 428,00 cm2
	For each use event, covers amount up to 2.000 g
	Covers use in a one car garage (34 m3) under typical ventilation.
	Covers use in room size of 34 m3
	Covers exposure up to 0,17 hours/event

Anti-Freeze and de-icing products Lock de-icer.	Covers concentrations up to 50 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 214,40 cm2
	For each use event, covers amount up to 4 g
	Covers use in a one car garage (34 m3) under typical ventilation.
	Covers use in room size of 34 m3
	Covers exposure up to 0,25 hours/event
Biocidal products (e.g. Disinfectants, pest control) (excipient only). Laundry and dish washing products.	Covers concentrations up to 5 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 857,50 cm2
	For each use event, covers amount up to 15 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 0,50 hours/event
Biocidal products (e.g. Disinfectants, pest control) (excipient only). Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners).	Covers concentrations up to 5 %
	covers use up to 128 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 857,50 cm2
	For each use event, covers amount up to 27 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 0,33 hours/event
Biocidal products (e.g. Disinfectants, pest control) (excipient only). Cleaners, trigger sprays (all purpose cleaners,sanitary products, glass cleaners).	Covers concentrations up to 15 %
	covers use up to 128 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 428,00 cm2
	For each use event, covers amount up to 35 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 0,17 hours/event
Coatings and paints, thinners, paint removers Wa-	Covers concentrations up to 1,5 %

terborne latex wall paint.	
	covers use up to 4 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 428,75 cm2
	For each use event, covers amount up to 2.760 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 2,20 hours/event
Coatings and paints, thinners, paint removers Solvent rich, high solid, water borne paint.	Covers concentrations up to 27,5 %
	covers use up to 6 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 428,75 cm2
	For each use event, covers amount up to 744 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 2,20 hours/event
Coatings and paints, thinners, paint removers Aerosol spray can.	Covers concentrations up to 50 %
	covers use up to 2 day/year
	Covers use up to 1 times/day of use
	For each use event, covers amount up to 215 g
	Covers use in a one car garage (34 m3) under typical ventilation.
	Covers use in room size of 34 m3
	Covers exposure up to 0,33 hours/event
Coatings and paints, thinners, paint removers Removers (paint-, glue-, wall paper-, sealant-remover).	Covers concentrations up to 50 %
	covers use up to 3 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 857,50 cm2
	For each use event, covers amount up to 491 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 2,00 hours/event
Fillers, Putties Fillers and putty.	Covers concentrations up to 2 %
	covers use up to 12 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 35,73 cm2
	For each use event, covers amount up to 85 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 4,00 hours/event
Fillers, Putties Plasters and floor equalizers.	Covers concentrations up to 2 %

	covers use up to 12 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 857,50 cm2
	For each use event, covers amount up to 13.800 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 2,00 hours/event
Fillers, Putties Modelling clay.	Covers concentrations up to 1 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 254,40 cm2
	For each use event, assumes swallowed amount of 1 g
Finger paints	Covers concentrations up to 50 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 254,40 cm2
	For each use event, assumes swallowed amount of 1,35 g
Non-metal-surface treatment products Waterborne latex wall paint.	Covers concentrations up to 1,5 %
	covers use up to 4 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 428,75 cm2
	For each use event, covers amount up to 2.760 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 2,20 hours/event
Non-metal-surface treatment products Solvent rich, high solid, water borne paint.	Covers concentrations up to 27,5 %
	covers use up to 6 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 428,75 cm2
	For each use event, covers amount up to 744 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 2,20 hours/event
Non-metal-surface treatment products Aerosol spray can.	Covers concentrations up to 50 %
	covers use up to 2 day/year
	Covers use up to 1 times/day of use
	For each use event, covers amount up to 215 g
	Covers use in a one car garage (34 m3) under typical ventilation.
	Covers use in room size of 34 m3
	Covers exposure up to 0,33 hours/event
Non-metal-surface treatment products Removers	Covers concentrations up to 50 %

(paint-, glue-, wall paper-, sealant-remover).	
	covers use up to 3 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 857,50 cm2
	For each use event, covers amount up to 491 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 2,00 hours/event
Ink and toners	Covers concentrations up to 10 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 71,40 cm2
	For each use event, covers amount up to 40 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 2,20 hours/event
Leather tanning, dye, finishing, impregnation and care products Polishes, wax / cream (floor, furniture, shoes).	Covers concentrations up to 50 %
	covers use up to 29 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 430,00 cm2
	For each use event, covers amount up to 56 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 1,23 hours/event
Leather tanning, dye, finishing, impregnation and care products Polishes, spray (furniture, shoes).	Covers concentrations up to 50 %
	covers use up to 8 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 430,00 cm2
	For each use event, covers amount up to 56 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 0,33 hours/event
Lubricants, greases, release products Liquids.	Covers concentrations up to 100 %
	covers use up to 4 day/year
	covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 468,00 cm2
	For each use event, covers amount up to 2.200 g
	Covers use in a one car garage (34 m3) under typical ventilation.
	Covers use in room size of 34 m3
	Covers exposure up to 0,17 hours/event
Lubricants, greases, re-	Covers concentrations up to 20 %

lease products Pastes.	
	covers use up to 10 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 468,00 cm2
	For each use event, covers amount up to 34 g
	Covers exposure up to 4 hours/event
Lubricants, greases, release products Sprays.	Covers concentrations up to 50 %
	covers use up to 6 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 428,75 cm2
	For each use event, covers amount up to 73 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 0,17 hours/event
Polishes and wax blends Polishes, wax / cream (floor, furniture, shoes).	Covers concentrations up to 85 %
	covers use up to 29 day/year
	covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 430,00 cm2
	For each use event, covers amount up to 165 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 1,23 hours/event
Polishes and wax blends Polishes, spray (furniture, shoes).	Covers concentrations up to 50 %
	covers use up to 8 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 430,00 cm2
	For each use event, covers amount up to 35 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 0,33 hours/event
Textile dyes, finishing and impregnating products; including bleaches and other processing aids	Covers concentrations up to 10 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 857,50 cm2
	For each use event, covers amount up to 115 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 1,00 hours/event

Section 2.2	**Control of Environmental Exposure**
No exposure assessment presented for the environment.	

SECTION 3	**EXPOSURE ESTIMATION**

Section 3.1 - Health
The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Consumer

300000001165	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in Cleaning Agents - Consumer
Use Descriptor	**Sector of Use**: SU21 **Product Categories**: PC3, PC4, PC8 (excipient only), PC9a, PC24, PC35, PC38 **Environmental Release Categories**: ERC8a, ERC8d, ESVOC SpERC 8.4c.v1
Scope of process	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.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Section 2.1	**Control of Consumer Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure > 10 Pa
Concentration of the Substance in Mixture/Article	Unless stated otherwise.
	Covers concentration up to (%): 100 %
Amounts Used	
Unless stated otherwise.	
for each use event, covers amount up to (g):	13.800
covers skin contact area (cm2):	857,5
Frequency and Duration of Use	
Unless stated otherwise.	
Covers use up to (days/year):	365
covers use up to (times/day of use):	4
Exposure (hours/event):	8
Other Operational Conditions affecting Exposure	
Unless stated otherwise. Covers use at ambient temperatures. Covers use in room size of 20m3 Covers use under typical household ventilation.	
Product Categories	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Air care products Air care, instant action (aerosol sprays).	Covers concentrations up to 50 %
	covers use up to 365 day/year
	covers use up to 4 times/day of use
	For each use event, covers amount up to 0,1 g
	Covers use under typical household ventilation.

	Covers use in room size of 20 m3
	Covers exposure up to 0,25 hours/event
Air care products Air care, instant action (aerosol sprays). pesticides (excipient only).	Covers concentrations up to 50 %
	covers use up to 365 day/year
	Covers use up to 4 times/day of use
	For each use event, covers amount up to 0,5 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 0,25 hours/event
Air care products Air care, continuous action (solid and liquid).	Covers concentrations up to 10 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 35,70 cm2
	For each use event, covers amount up to 0,48 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 8,00 hours/event
Air care products Air care, continuous action (solid and liquid). pesticides (excipient only).	Covers concentrations up to 50 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 35,70 cm2
	For each use event, covers amount up to 0,48 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 8,00 hours/event
Anti-Freeze and de-icing products Washing car window.	Covers concentrations up to 1 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	For each use event, covers amount up to 0,5 g
	Covers use in a one car garage (34 m3) under typical ventilation.
	Covers use in room size of 34 m3
	Covers exposure up to 0,02 hours/event
Anti-Freeze and de-icing products Pouring into radiator.	Covers concentrations up to 10 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 428,00 cm2
	For each use event, covers amount up to 2.000 g
	Covers use in a one car garage (34 m3) under typical ventila-

	tion.
	Covers use in room size of 34 m3
	Covers exposure up to 0,17 hours/event
Anti-Freeze and de-icing products Lock de-icer.	Covers concentrations up to 50 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 214,40 cm2
	For each use event, covers amount up to 4 g
	Covers use in a one car garage (34 m3) under typical ventilation.
	Covers use in room size of 34 m3
	Covers exposure up to 0,25 hours/event
Biocidal products (e.g. Disinfectants, pest control) (excipient only). Laundry and dish washing products.	Covers concentrations up to 5 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 857,50 cm2
	For each use event, covers amount up to 15 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 0,50 hours/event
Biocidal products (e.g. Disinfectants, pest control) (excipient only). Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners).	Covers concentrations up to 5 %
	covers use up to 128 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 857,50 cm2
	For each use event, covers amount up to 27 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 0,33 hours/event
Biocidal products (e.g. Disinfectants, pest control) (excipient only). Cleaners, trigger sprays (all purpose cleaners,sanitary products, glass cleaners).	Covers concentrations up to 15 %
	covers use up to 128 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 428,00 cm2
	For each use event, covers amount up to 35 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3

	Covers exposure up to 0,17 hours/event
Coatings and paints, thinners, paint removers Waterborne latex wall paint.	Covers concentrations up to 1,5 %
	covers use up to 4 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 428,75 cm2
	For each use event, covers amount up to 2.760 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 2,20 hours/event
Coatings and paints, thinners, paint removers Solvent rich, high solid, water borne paint.	Covers concentrations up to 27,5 %
	covers use up to 6 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 428,75 cm2
	For each use event, covers amount up to 744 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 2,20 hours/event
Coatings and paints, thinners, paint removers Aerosol spray can.	Covers concentrations up to 50 %
	covers use up to 2 day/year
	Covers use up to 1 times/day of use
	For each use event, covers amount up to 215 g
	Covers use in a one car garage (34 m3) under typical ventilation.
	Covers use in room size of 34 m3
	Covers exposure up to 0,33 hours/event
Coatings and paints, thinners, paint removers Removers (paint-, glue-, wall paper-, sealant-remover).	Covers concentrations up to 50 %
	covers use up to 3 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 857,50 cm2
	For each use event, covers amount up to 491 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 2,00 hours/event
Lubricants, greases, release products Liquids.	Covers concentrations up to 100 %
	covers use up to 4 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 468,00 cm2
	For each use event, covers amount up to 2.200 g
	Covers use in a one car garage (34 m3) under typical ventilation.

	Covers use in room size of 34 m3
	Covers exposure up to 0,17 hours/event
Lubricants, greases, release products Pastes.	Covers concentrations up to 20 %
	covers use up to 10 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 468,00 cm2
	For each use event, covers amount up to 34 g
	Covers exposure up to 4 hours/event
Lubricants, greases, release products Sprays.	Covers concentrations up to 50 %
	covers use up to 6 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 428,75 cm2
	For each use event, covers amount up to 73 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 0,17 hours/event
Washing and cleaning products (including solvent based products) Laundry and dish washing products.	Covers concentrations up to 5 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 857,50 cm2
	For each use event, covers amount up to 15 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 0,50 hours/event
Washing and cleaning products (including solvent based products) Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners).	Covers concentrations up to 5 %
	covers use up to 128 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 857,50 cm2
	For each use event, covers amount up to 27 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 0,33 hours/event
Washing and cleaning products (including solvent based products) Cleaners, trigger sprays (all purpose cleaners,sanitary products, glass cleaners).	Covers concentrations up to 15 %
	covers use up to 128 day/year

	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 428,00 cm2
	For each use event, covers amount up to 35 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 0,17 hours/event
Welding and soldering products (with flux coatings or flux cores.), flux products	Covers concentrations up to 20 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	For each use event, covers amount up to 12 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 1 hours/event

Section 2.2	**Control of Environmental Exposure**
No exposure assessment presented for the environment.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Consumer

300000001166	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Lubricants - Consumer
Use Descriptor	**Sector of Use**: SU21 **Product Categories**: PC1, PC24, PC31 **Environmental Release Categories**: ERC8a, ERC8d, ERC9a, ERC9b, ESVOC SpERC 8.6c.v1, ESVOC SpERC 9.6b.v1
Scope of process	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.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Section 2.1	**Control of Consumer Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure > 10 Pa
Concentration of the Substance in Mixture/Article	Unless stated otherwise.
	Covers concentration up to (%): 100 %
Amounts Used	
Unless stated otherwise.	
for each use event, covers amount up to (g):	6.390
covers skin contact area (cm2):	468
Frequency and Duration of Use	
Unless stated otherwise.	
Covers use up to (days/year):	365
covers use up to (times/day of use):	1
Exposure (hours/event):	6
Other Operational Conditions affecting Exposure	
Unless stated otherwise. Covers use at ambient temperatures. Covers use in room size of 20m3 Covers use under typical household ventilation.	
Product Categories	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Adhesives, sealants Glues, hobby use.	Covers concentrations up to 30 %
	covers use up to 365 day/year
	covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 35,73 cm2
	For each use event, covers amount up to 9 g
	Covers use under typical household ventilation.

	Covers use in room size of 20 m3
	Covers exposure up to 4,00 hours/event
Adhesives, sealants Glues DIY-use (carpet glue, tile glue, wood parquet glue).	Covers concentrations up to 30 %
	covers use up to 1 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 110,00 cm2
	For each use event, covers amount up to 6.390 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 6,00 hours/event
Adhesives, sealants Glue from spray.	Covers concentrations up to 30 %
	covers use up to 6 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 35,73 cm2
	For each use event, covers amount up to 85,05 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 4,00 hours/event
Adhesives, sealants Sealants.	Covers concentrations up to 30 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 35,73 cm2
	For each use event, covers amount up to 75 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 1,00 hours/event
Lubricants, greases, release products Liquids.	Covers concentrations up to 100 %
	covers use up to 4 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 468,00 cm2
	For each use event, covers amount up to 2.200 g
	Covers use in a one car garage (34 m3) under typical ventilation.
	Covers use in room size of 34 m3
	Covers exposure up to 0,17 hours/event
Lubricants, greases, release products Pastes.	Covers concentrations up to 20 %
	covers use up to 10 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 468,00 cm2
	For each use event, covers amount up to 34 g
	Covers exposure up to 4 hours/event
Lubricants, greases, release products Sprays.	Covers concentrations up to 50 %
	covers use up to 6 day/year
	Covers use up to 1 times/day of use

	covers skin contact area up to (cm2): 428,75 cm2
	For each use event, covers amount up to 73 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 0,17 hours/event
Polishes and wax blends Polishes, wax / cream (floor, furniture, shoes).	Covers concentrations up to 50 %
	covers use up to 29 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 430,00 cm2
	For each use event, covers amount up to 142 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 1,23 hours/event
Polishes and wax blends Polishes, spray (furniture, shoes).	Covers concentrations up to 50 %
	covers use up to 8 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 430,00 cm2
	For each use event, covers amount up to 35 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 0,33 hours/event

Section 2.2	**Control of Environmental Exposure**
No exposure assessment presented for the environment.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Consumer

300000001167	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use as a fuel - Consumer
Use Descriptor	**Sector of Use**: SU21 **Product Categories**: PC13 **Environmental Release Categories**: ERC9a, ERC9b, ESVOC SpERC 9.12c.v1
Scope of process	Covers consumer uses in liquid fuels.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Section 2.1	**Control of Consumer Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure > 10 Pa
Concentration of the Substance in Mixture/Article	Unless stated otherwise.
	Covers concentration up to (%): 100 %
Amounts Used	
Unless stated otherwise.	
for each use event, covers amount up to (g):	37.500
covers skin contact area (cm2):	420
Frequency and Duration of Use	
Unless stated otherwise.	
Covers use up to (days/year):	365
covers use up to (times/day of use):	1
Exposure (hours/event):	2
Other Operational Conditions affecting Exposure	
Unless stated otherwise. Covers use at ambient temperatures. Covers use in room size of 20m3 Covers use under typical household ventilation.	
Product Categories	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Fuels Liquid: Automotive Refuelling.	Covers concentrations up to 100 %
	covers use up to 52 day/year
	covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 210,00 cm2
	For each use event, covers amount up to 37.500 g
	Covers outdoor use.
	Covers use in room size of 100 m3
	Covers exposure up to 0,05 hours/event
Fuels Liquid Scooter Refuelling.	Covers concentrations up to 100 %

	covers use up to 52 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 210,00 cm2
	For each use event, covers amount up to 3.750 g
	Covers outdoor use.
	Covers use in room size of 100 m3
	Covers exposure up to 0,03 hours/event
Fuels Liquid, Garden Equipment - Use.	Covers concentrations up to 100 %
	covers use up to 26 day/year
	Covers use up to 1 times/day of use
	For each use event, covers amount up to 750 g
	Covers outdoor use.
	Covers use in room size of 100 m3
	Covers exposure up to 2,00 hours/event
Fuels Liquid: Garden Equipment - Refuelling.	Covers concentrations up to 100 %
	covers use up to 26 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 420,00 cm2
	For each use event, covers amount up to 750 g
	Covers use in a one car garage (34 m3) under typical ventilation.
	Covers use in room size of 34 m3
	Covers exposure up to 0,03 hours/event
Fuels Liquid: Home space heater fuel.	Covers concentrations up to 100 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 210,00 cm2
	For each use event, covers amount up to 3.000 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 0,03 hours/event
Fuels Liquid: Lamp oil.	Covers concentrations up to 100 %
	covers use up to 52 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 210,00 cm2
	For each use event, covers amount up to 100 g
	Covers use under typical household ventilation.
	Covers use in room size of 20 m3
	Covers exposure up to 0,01 hours/event

Section 2.2	**Control of Environmental Exposure**
No exposure assessment presented for the environment.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**

Section 4.1 - Health
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.

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Consumer

300000001168	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Functional Fluids - Consumer
Use Descriptor	**Sector of Use**: SU21 **Product Categories**: PC16, PC17 **Environmental Release Categories**: ERC9a, ERC9b, ESVOC SpERC 9.13c.v1
Scope of process	Use of sealed items containing functional fluids e.g. transfer oils, hydraulic fluids, refrigerants.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Section 2.1	**Control of Consumer Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure > 10 Pa
Concentration of the Substance in Mixture/Article	Unless stated otherwise.
	Covers concentration up to (%): 100 %
Amounts Used	
Unless stated otherwise.	
for each use event, covers amount up to (g):	2.200
covers skin contact area (cm2):	468
Frequency and Duration of Use	
Unless stated otherwise.	
Covers use up to (days/year):	4
covers use up to (times/day of use):	1
Exposure (hours/event):	0,17
Other Operational Conditions affecting Exposure	
Unless stated otherwise. Covers use at ambient temperatures. Covers use in room size of 20m3 Covers use under typical household ventilation.	
Product Categories	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Heat transfer fluids Liquids.	Covers concentrations up to 100 %
	covers use up to 4 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 468,00 cm2
	For each use event, covers amount up to 2.200 g
	Covers use in a one car garage (34 m3) under typical ventilation.
	Covers use in room size of 34 m3
	Covers exposure up to 0,17 hours/event
Hydraulic fluids Liquids.	Covers concentrations up to 100 %

	covers use up to 4 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 468,00 cm2
	For each use event, covers amount up to 2.200 g
	Covers use in a one car garage (34 m3) under typical ventilation.
	Covers use in room size of 34 m3
	Covers exposure up to 0,17 hours/event

Section 2.2	**Control of Environmental Exposure**
No exposure assessment presented for the environment.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
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.	

Section 4.2 -Environment
No exposure assessment presented for the environment.

Exposure Scenario - Consumer

300000001170	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Other Consumer Uses - Consumer
Use Descriptor	**Sector of Use**: SU21 **Product Categories**: PC28, PC39 **Environmental Release Categories**: ERC8a, ERC8d, ESVOC SpERC 8.16.v1
Scope of process	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.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for human health.
Section 2.1	**Control of Consumer Exposure**
Product Characteristics	
Product Categories	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**

Section 2.2	**Control of Environmental Exposure**
No exposure assessment presented for the environment.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
No exposure assessment presented for human health.	

Section 3.2 -Environment
No exposure assessment presented for the environment.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
No exposure assessment presented for human health.	

Section 4.2 -Environment
No exposure assessment presented for the environment.