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

Shell Isoparaffins WS190

Version	Revision Date:	SDS Number:	Date of last issue: 31.10.2024
6.3	17.02.2025	800010027181	Print Date 24.02.2025

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

1.1 Product identifier

Trade name	:	Shell Isoparaffins WS190
Product code	:	Q6569
Registration number EU	:	01-2120083063-63-0000
Synonyms	:	Hydrocarbons C10-C13, n-alkanes, isoalkanes, <2% aromatics
CAS-No.	:	185857-36-7
EC-No.	:	940-726-3

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

Use of the Substance/Mixture	:	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. This product must not be used in applications other than those listed in Section 1 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 Centre: (+41) 145

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.

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

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements :

PHYSICAL HAZARDS:
Not classified as a physical hazard according to CLP criteria.
HEALTH HAZARDS:
H304 May be fatal if swallowed and enters airways.
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:

P243 Take action to prevent static discharges.

Response:

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

Storage:

P405 Store locked up.

Disposal:

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

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)
Alkanes, C10-13-branched and linear	185857-36-7 940-726-3	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 : No treatment necessary under normal conditions of use.
If symptoms persist, obtain medical advice.

In case of skin contact : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.
If persistent irritation occurs, obtain medical attention.

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 : Not considered to be an inhalation hazard under normal conditions of use.
Possible respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing.

No specific hazards under normal use conditions.
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 appropriate 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.

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
Aliphatic dearom. solvents 200 - 250	Not Assigned	TWA	1.050 mg/m3	EU HSPA

Biological occupational exposure limits

No biological limit allocated.

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

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

Substance name	Environmental Compartment	Value
Alkanes, C10-13-branched and linear		
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.

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:
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.

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: butyl-rubber Nitrile rubber gloves. Incidental contact/Splash protection: Nitrile rubber gloves. For continuous contact we recommend gloves with break-through 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 : Skin protection is not required under normal conditions of use.
For prolonged or repeated exposures use impervious clothing over parts of the body subject to exposure.
If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to relevant Standard, and provide employee skin care programmes.

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 appropriate 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 : colourless

Odour : Hydrocarbon

Odour Threshold	:	Data not available
Melting / freezing point	:	Data not available
Boiling point/boiling range	:	180 - 230 °C
Flammability		
Flammability (solid, gas)	:	Not applicable
Lower explosion limit and upper explosion limit / flammability limit		
Upper explosion limit / Upper flammability limit	:	7 %(V)
Lower explosion limit / Lower flammability limit	:	0,5 %(V)
Flash point	:	61 °C
Auto-ignition temperature	:	> 200 °C
Decomposition temperature		
Decomposition temperature	:	Data not available
pH	:	Not applicable
Viscosity		
Viscosity, dynamic	:	Data not available
Viscosity, kinematic	:	< 2 mm2/s (25 °C) Method: ASTM D445
Solubility(ies)		
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	log Pow: 4,5 - 7
Vapour pressure	:	Data not available (50 °C)
Relative density	:	< 0,8 Method: ASTM D4052
Density	:	< 800 kg/m3 (15 °C) Method: ASTM D4052
Relative vapour density	:	Data not available
Particle characteristics		
Particle size	:	Data not available

9.2 Other information

Explosive properties	:	Not classified Classification Code: Not classified
Oxidizing properties	:	Not applicable
Evaporation rate	:	Data not available
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	:	Data not available
Molecular weight	:	Data not available

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: 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:

Alkanes, C10-13-branched and linear:

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

Acute inhalation toxicity : LC 50 (Rat, male and female): > 5 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 concen-

tration.
Based on data from similar materials
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 : Test(s) equivalent or similar to OECD Test Guideline 404
Remarks : Moderately irritating to skin (but insufficient to classify).
Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.

Components:

Alkanes, C10-13-branched and linear:

Species : Rabbit
Method : Test(s) equivalent or similar to OECD Test Guideline 404
Remarks : Moderately irritating to skin (but insufficient to classify).
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 : Based on available data, the classification criteria are not met.

Components:

Alkanes, C10-13-branched and linear:

Species : Rabbit
Method : OECD Test Guideline 405
Remarks : 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:

Alkanes, C10-13-branched and linear:

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:

Alkanes, C10-13-branched and linear:

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:

Alkanes, C10-13-branched and linear:

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.

Material	GHS/CLP Carcinogenicity Classification
Alkanes, C10-13-branched and linear	No carcinogenicity classification.

Reproductive toxicity

Product:

Effects on fertility	:	Species: Rat Sex: male and female Application Route: Oral Method: 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:

Alkanes, C10-13-branched and linear:

Effects on fertility	:	Species: Rat Sex: male and female Application Route: Oral Method: Test(s) equivalent or similar to OECD Test Guideline 415. 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:

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

Components:

Alkanes, C10-13-branched and linear:

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

STOT - repeated exposure

Product:

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

Components:

Alkanes, C10-13-branched and linear:

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:

Alkanes, C10-13-branched and linear:

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:

Alkanes, C10-13-branched and linear:

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:

Alkanes, C10-13-branched and linear:

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: Practically non toxic:
LL/EL/IL50 > 100 mg/l

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: Practically non toxic:
LL/EL/IL50 > 100 mg/l

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (algae)): > 1.000 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Practically non toxic:
LL/EL/IL50 > 100 mg/l

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:

Alkanes, C10-13-branched and linear:

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): > 1.000 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/l
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: Practically non toxic: LL/EL/IL50 > 100 mg/l
Toxicity to algae/aquatic plants	:	EL50 (Pseudokirchneriella subcapitata (algae)): > 1.000 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/l
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:

Alkanes, C10-13-branched and linear:

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:

Alkanes, C10-13-branched and linear:

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:

Alkanes, C10-13-branched and linear:

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:

Alkanes, C10-13-branched and linear:

Assessment : The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered 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 : Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

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

ADN : 9003

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.2 UN proper shipping name

ADN : SUBSTANCES WITH FLASHPOINT > 60°C BUT NOT MORE THAN 100 °C
(Alkanes, C10-13-branched and linear)

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADN : 9

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.4 Packing group

ADN
Packing group : Not Assigned
Classification Code : M12
Labels : 9 (F)
CDNI Inland Water Waste Agreement : NST 8963 Solvent

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.5 Environmental hazards

ADN
Environmentally hazardous : no

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

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 nitro-

gen 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

REACH - List of substances subject to authorisation (Annex XIV) : Product is not subject to Authorisation under REACH.

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

Waters Protection Ordinance (WPO 814.201)
Water pollution class : Swiss Class A, (www.tankportal.ch)

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.

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

DSL : Listed

ENCS : Listed

KECI : Listed

TSCA : Listed

IECSC : Notified with Restrictions.

PICCS : Notified with Restrictions.

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 carrying 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.

Due to a change in detail in Section 15, this document has been released as a significant change.

Sources of key data used to : The quoted data are from, but not limited to, one or more

compile the Safety Data Sheet	sources of information (e.g. toxicological data from Shell Health Services, material suppliers' data, CONCAWE, EU IUCLID date base, EC 1272 regulation, etc).

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 : Use in coatings
- Industrial

Uses - Worker
Title : Use 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
Low Environmental Release
High Environmental Release

Uses - Worker

Title	:	Metal working fluids / rolling oils - Industrial

Uses - Worker

Title	:	Metal working fluids / rolling oils - Professional High Environmental Release

Uses - Worker

Title	:	Use as binders and release agents - Industrial

Uses - Worker

Title	:	Use as binders and release agents - Professional

Uses - Worker

Title	:	Use in agrochemicals - 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	:	Use in road and construction products - Professional

Uses - Worker

Title	:	Use in laboratories - Industrial

Uses - Worker
Title : Use in laboratories
- Professional

Uses - Worker
Title : Rubber production and processing
- Industrial

Uses - Worker
Title : Use in polymer processing
- Industrial

Uses - Worker
Title : Use in polymer processing
- Professional

Uses - Worker
Title : Water treatment chemicals
- Industrial

Uses - Worker
Title : Water treatment chemicals
- Professional

Identified Uses according to the Use Descriptor System
Uses - Consumer
Title : Use in coatings
- Consumer

Uses - Consumer
Title : Use in Cleaning Agents
- Consumer

Uses - Consumer
Title : Lubricants
- Consumer
Low Environmental Release
High Environmental Release

Uses - Consumer
Title : Use in agrochemicals
- Consumer

Uses - Consumer

Title	:	Use as a fuel - 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.

CH / EN

Exposure Scenario - Worker

300000010600	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Manufacture of substance- Industrial
Use Descriptor	**Sector of Use**: SU3, SU8, SU9 **Process Categories**: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC15 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

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

Not applicable. Risk Management Measures are based on qualitative risk characterisation.

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010601	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Distribution of substance- Industrial
Use Descriptor	**Sector of Use**: SU3, SU8, SU9 **Process Categories**: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC15 **Environmental Release Categories**: ERC1, ERC2, ERC3, ERC4, ERC5, ERC6a, ERC6b, ERC6c, ERC6d, 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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

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

Not applicable.
Risk Management Measures are based on qualitative risk characterisation.

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010602	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Formulation & (re)packing of substances and mixtures- Industrial
Use Descriptor	**Sector of Use**: SU3, SU10 **Process Categories**: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**

Section 3.1 - Health
Not applicable. Risk Management Measures are based on qualitative risk characterisation.

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010603	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in coatings- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	EXPOSURE ESTIMATION

Section 3.1 - Health

Not applicable.
Risk Management Measures are based on qualitative risk characterisation.

Section 3.2 -Environment

Not applicable.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO

Section 4.1 - Health

Not applicable.

Section 4.2 -Environment

Not applicable.

Exposure Scenario - Worker

300000010604	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in coatings- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19 **Environmental Release Categories**: ERC8a, ERC8d, ESVOC SpERC 8.3b.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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	EXPOSURE ESTIMATION

Section 3.1 - Health

Not applicable.
Risk Management Measures are based on qualitative risk characterisation.

Section 3.2 -Environment

Not applicable.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO

Section 4.1 - Health

Not applicable.

Section 4.2 -Environment

Not applicable.

Exposure Scenario - Worker

300000010605	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in Cleaning Agents- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC10, PROC13 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**

Section 3.1 - Health
Not applicable. Risk Management Measures are based on qualitative risk characterisation.

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010606	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in Cleaning Agents- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13, 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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

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

Not applicable. Risk Management Measures are based on qualitative risk characterisation.

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010609	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Lubricants- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC1, PROC2, PROC3, PROC4, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC17, PROC18 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

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

Not applicable. Risk Management Measures are based on qualitative risk characterisation.

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010610	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Lubricants- ProfessionalLow Environmental ReleaseHigh Environmental Release
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC17, PROC18, PROC20 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	EXPOSURE ESTIMATION

Section 3.1 - Health

Not applicable.
Risk Management Measures are based on qualitative risk characterisation.

Section 3.2 -Environment

Not applicable.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO

Section 4.1 - Health

Not applicable.

Section 4.2 -Environment

Not applicable.

Exposure Scenario - Worker

300000010612	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Metal working fluids / rolling oils- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC17 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	EXPOSURE ESTIMATION

Section 3.1 - Health

Not applicable.
Risk Management Measures are based on qualitative risk characterisation.

Section 3.2 -Environment

Not applicable.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO

Section 4.1 - Health

Not applicable.

Section 4.2 -Environment

Not applicable.

Exposure Scenario - Worker

300000010613	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Metal working fluids / rolling oils- ProfessionalHigh Environmental Release
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC1, PROC2, PROC3, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC17 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	EXPOSURE ESTIMATION

Section 3.1 - Health

Not applicable.
Risk Management Measures are based on qualitative risk characterisation.

Section 3.2 -Environment

Not applicable.

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO

Section 4.1 - Health

Not applicable.

Section 4.2 -Environment

Not applicable.

Exposure Scenario - Worker

300000010614	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use as binders and release agents- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC1, PROC2, PROC3, PROC4, PROC6, PROC7, PROC8a, PROC8b, PROC10, PROC13, PROC14 **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), mould forming and casting, and handling of waste.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable.	

Risk Management Measures are based on qualitative risk characterisation.

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010615	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use as binders and release agents- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC1, PROC2, PROC3, PROC4, PROC6, PROC8a, PROC8b, PROC10, PROC11, PROC14 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010616	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in agrochemicals- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC1, PROC2, PROC4, PROC8a, PROC8b, PROC11, PROC13 **Environmental Release Categories**: ERC8a, ERC8d, ESVOC SpERC 8.11a.v1
Scope of process	Use as an agrochemical excipient for application by manual or machine spraying, smokes and fogging; including equipment clean-downs and disposal.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010618	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use as a fuel- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC16 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010619	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use as a fuel- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC16 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010621	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Functional Fluids- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010622	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Functional Fluids- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC1, PROC2, PROC3, PROC8a, PROC9, PROC20 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010623	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in road and construction products- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC1, PROC2, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010625	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in laboratories- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC15 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment

Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010626	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in laboratories- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC15 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010627	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Rubber production and processing- Industrial
Use Descriptor	**Sector of Use**: SU3, SU10 **Process Categories**: PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC7, PROC8a, PROC8b, PROC9, PROC13, PROC14, PROC15, PROC21 **Environmental Release Categories**: ERC1, ERC4, ERC6d, ESVOC SpERC 4.19.v1
Scope of process	Manufacture of tyres and general rubber articles, including processing of raw (uncured) rubber, handling and mixing of rubber additives, vulcanising, cooling and finishing.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable.	

Risk Management Measures are based on qualitative risk characterisation.

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010628	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in polymer processing- Industrial
Use Descriptor	**Sector of Use**: SU10 **Process Categories**: PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC13, PROC14, PROC21 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

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

Not applicable. Risk Management Measures are based on qualitative risk characterisation.

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010629	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in polymer processing- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC1, PROC2, PROC6, PROC8a, PROC8b, PROC14, PROC21 **Environmental Release Categories**: ERC8a, ERC8d, ESVOC SpERC 8.21b.v1
Scope of process	Processing of formulated polymers including material transfers, moulding and forming activities, material re-works and associated maintenance.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010630	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Water treatment chemicals- Industrial
Use Descriptor	**Sector of Use**: SU3 **Process Categories**: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC13 **Environmental Release Categories**: ERC3, ERC4, ESVOC SpERC 3.22a.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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment
Not applicable.

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

Section 4.1 - Health
Not applicable.

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Worker

300000010631	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Water treatment chemicals- Professional
Use Descriptor	**Sector of Use**: SU22 **Process Categories**: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC13 **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**
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 percentage substance in the product up to 100%., Unless stated otherwise.,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Operation is carried out at elevated temperature (> 20°C above ambient temperature). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance
Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment
Not applicable.

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

Section 4.1 - Health
Not applicable.

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Consumer

300000010607	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in coatings - Consumer
Use Descriptor	**Sector of Use**: SU21 **Product Categories**: PC1, PC4, PC8 (excipient only), PC9a, PC9b, PC15, PC18, PC24, PC23, 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	
Product Categories	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance

Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment
Not applicable.

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

Section 4.1 - Health
Not applicable.

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Consumer

300000010608	
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, PC9b, PC9c, 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	
Product Categories	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance

Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment
Not applicable.

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

Section 4.1 - Health
Not applicable.

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Consumer

300000010611	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Lubricants - Consumer Low Environmental Release High Environmental Release
Use Descriptor	**Sector of Use**: SU21 **Product Categories**: PC1, PC24, PC31 **Environmental Release Categories**: ERC8a, ERC8d, ERC9a, ERC9b, ESVOC SpERC 8.6e.v1, ESVOC SpERC 9.6d.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	
Product Categories	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance

Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment
Not applicable.

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

	EXPOSURE SCENARIO
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Consumer

300000010617	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in agrochemicals - Consumer
Use Descriptor	**Sector of Use**: SU21 **Product Categories**: PC8 (excipient only), PC12, PC27 **Environmental Release Categories**: ERC8a, ERC8d, ESVOC SpERC 8.11b.v1
Scope of process	Covers the consumer use in agrochemicals in liquid and solid forms.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Section 2.1	**Control of Consumer Exposure**
Product Characteristics	
Product Categories	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance

Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Consumer

300000010620	
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	
Product Categories	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance

Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment
Not applicable.

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Not applicable.	

Section 4.2 -Environment
Not applicable.

Exposure Scenario - Consumer

300000010624	
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**
Section 2.1	**Control of Consumer Exposure**
Product Characteristics	
Product Categories	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
General measures (Aspiration)	The H304 hazard statement (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard. Do not ingest. If swallowed, then seek immediate medical assistance

Section 2.2	**Control of Environmental Exposure**
Not applicable.	

SECTION 3	**EXPOSURE ESTIMATION**
Section 3.1 - Health	
Not applicable. Risk Management Measures are based on qualitative risk characterisation.	

Section 3.2 -Environment
Not applicable.

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

Section 4.1 - Health
Not applicable.

Section 4.2 -Environment
Not applicable.