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

Methanol

Version	Revision Date:	SDS Number:	Date of last issue: 17.02.2025
5.2	28.02.2025	800001033917	Print Date 07.03.2025

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

1.1 Product identifier

Trade name	:	Methanol
Product code	:	S8111, S811D, S811E
Registration number EU	:	01-2119433307-44-0006, 01-2119433307-44-0007, 01-2119433307-44-0008, 01-2119433307-44-0015, 01-2119433307-44-0016
Synonyms	:	carbinol, MEOH, methyl hydroxide, monohydroxy methane
CAS-No.	:	67-56-1

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

Use of the Substance/Mixture	:	Solvent., Raw material for use in the chemical industry. 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)

Flammable liquids, Category 2	H225: Highly flammable liquid and vapour.

Acute toxicity, Category 3, Inhalation	H331: Toxic if inhaled.
Acute toxicity, Category 3, Dermal	H311: Toxic in contact with skin.
Acute toxicity, Category 3, Oral	H301: Toxic if swallowed.
Specific target organ toxicity - single exposure, Category 1, Visual system , Nervous system	H370: Causes damage to organs.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements :

PHYSICAL HAZARDS:
H225 Highly flammable liquid and vapour.
HEALTH HAZARDS:
H311 Toxic in contact with skin.
H301 Toxic if swallowed.
H331 Toxic if inhaled.
H370 Causes damage to organs (Eyes, Nervous system).
ENVIRONMENTAL HAZARDS:
Not classified as environmental hazard according to CLP criteria.

Precautionary statements :

Prevention:

P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P243 Take precautionary measures against static discharge.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

Storage:

No precautionary phrases.

Disposal:

No precautionary phrases.

2.3 Other hazards

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.

In use, may form flammable/explosive vapour-air mixture.
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. Index-No. Registration number	Classification	Concentration (% w/w)
Methanol	67-56-1 200-659-6 603-001-00-X 01-2119433307-44	Flam. Liq. 2; H225 Acute Tox. 3; H331 Acute Tox. 3; H311 Acute Tox. 3; H301 STOT SE 1; H370 (Visual system, Nervous system) specific concentration limit STOT SE 1; H370 >= 10 % STOT SE 2; H371 3 - < 10 % Acute oral toxicity: Acute toxicity estimate 100 mg/kg bw Acute inhalation toxicity: Acute toxicity estimate 3 mg/l Acute dermal toxicity: Acute toxicity estimate 300 mg/kg bw	<= 100

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : DO NOT DELAY.
Keep victim calm. Obtain medical treatment immediately.

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 : Call emergency number for your location / facility.
Remove to fresh air. Do not attempt to rescue the victim unless proper respiratory protection is worn. If the victim has difficulty breathing or tightness of the chest, is dizzy, vomiting, or unresponsive, give 100% oxygen with rescue breathing or Cardio-Pulmonary Resuscitation as required and transport to the nearest medical facility.

In case of skin contact : Remove contaminated clothing. Immediately flush skin with large amounts of water for at least 15 minutes. Transport to the nearest medical facility for additional treatment.

In case of eye contact : Flush eye with copious quantities of water.
Remove contact lenses, if present and easy to do. Continue rinsing.
If persistent irritation occurs, obtain medical attention.

If swallowed : 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.
Rinse mouth.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing.
Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, lightheadedness, headache and nausea.
Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters.
Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.
Symptoms may vary by the agent. Symptoms may extend to being locally corrosive to involving generalized systems in-

cluding respiratory system, circulatory system, central nervous system (CNS), and may lead to death.
Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance.
Acute methanol toxicity may progress as follows: drowsiness or fatigue, and mild irritation of the eyes and mucous membranes; this may be followed (in about 18 to 24 hours and in some cases up to 72 hours) by more severe central nervous system (CNS) effects and visual disturbances including diminished eyesight or blindness, metabolic acidosis (metabolism to formic acid) and deep respirations.
Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death.
Acute irritation of the respiratory system leading to tightness of the chest and an asthmatic condition.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : IMMEDIATE TREATMENT IS EXTREMELY IMPORTANT!
Call a doctor or poison control center for guidance.
Treat symptomatically.
Causes acidosis. Causes central nervous system depression. Symptoms and effects may be delayed for 18 to 24 hours and in some cases up to 72 hours. Treatment of poisoning may require use of ethanol. Treatment of acidosis may include correction with alkali solution, haemodialysis and supportive measures such as correction of electrolyte imbalances, where necessary. Potassium supplements may also be required.
May lead to respiratory depression and or central nervous system (CNS) depression resulting difficulty breathing, dizziness, light-headedness, headache, nausea and loss of coordination. Continued exposure may result in unconsciousness and death.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing media : None

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : The vapour is heavier than air, spreads along the ground and distant ignition is possible.
Carbon monoxide may be evolved if incomplete combustion

occurs.

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	:	Clear fire area of all non-emergency personnel. 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 the 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. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Vapour may form an explosive mixture with air. 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. Stay upwind and keep out of low areas. 6.1.2 For emergency responders: Avoid contact with skin, eyes and clothing. Isolate hazard area and deny entry to unnecessary or unprotected personnel. Stay upwind and keep out of low areas.

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. Ventilate contaminated area thoroughly.

Monitor area with combustible gas indicator.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : 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
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.

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 contact with skin, eyes and clothing.
Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols.
Bulk storage tanks should be diked (bunded).
Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks.
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.
Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.
Do NOT use compressed air for filling, discharging, or handling operations.

Product Transfer : Refer to guidance under Handling section.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : The vapour is heavier than air. Beware of accumulation in pits and confined spaces. Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

Packaging material : Suitable material: For containers, or container linings use mild steel, stainless steel.
Unsuitable material: Natural, butyl, neoprene or nitrile rubbers.

Container Advice : Containers, even those that have been emptied, can contain explosive vapours. 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.

Ensure that all local regulations regarding handling and storage facilities are followed.
See additional references that provide safe handling practices: 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
Methanol	67-56-1	TWA	200 ppm 260 mg/m3	CH SUVA
	Further information: Toxic by skin resorption possible; Substances, which are easily absored through the skin, can give by additional skin resoption a substancial higher risk compared to only inhalation by the airways., National Institute for Occupational Safety and Health, National Institute of Research and Safety for the prevention of work accidents and occupational diseases, Harm to the unborn child is not to be expected when the OEL-value is respected			
Methanol		STEL	400 ppm 520 mg/m3	CH SUVA
	Further information: Toxic by skin resorption possible; Substances, which are easily absored through the skin, can give by additional skin resoption a substancial higher risk compared to only inhalation by the airways., National Insti-			

	tute for Occupational Safety and Health, National Institute of Research and Safety for the prevention of work accidents and occupational diseases, Harm to the unborn child is not to be expected when the OEL-value is respected

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
Methanol	67-56-1	Methanol: 30 mg/l (Urine)	Immediately after exposure or after working hours, In case of long-term exposure: after more than one shift	CH BAT
		Methanol: micromol per litre (Urine)	Immediately after exposure or after working hours, In case of long-term exposure: after more than one shift	CH BAT

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Methanol, 67-56-1	Workers	Inhalation	Acute systemic effects	260 mg/m3
Methanol, 67-56-1	Workers	Dermal	Long-term systemic effects	40 mg/kg/day
Methanol, 67-56-1	Workers	Inhalation	Long-term systemic effects	260 mg/m3
Methanol, 67-56-1	Consumers	Inhalation	Acute systemic effects	50 mg/m3
Methanol, 67-56-1	Consumers	Dermal	Long-term systemic effects	8 mg/kg/day
Methanol, 67-56-1	Consumers	Inhalation	Long-term systemic effects	50 mg/m3
Methanol, 67-56-1	Consumers	Oral	Long-term systemic effects	8 mg/kg/day

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

Substance name	Environmental Compartment	Value
Remarks:	Exposure assessments have not been presented for the environment therefore PNEC values not required.	

8.2 Exposure controls

Engineering measures

Read in conjunction with the Exposure Scenario for your specific use contained in the Annex.
Use sealed systems as far as possible.
Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits.
Local exhaust ventilation is recommended.
Firewater monitors and deluge systems are recommended.
Eye washes and showers for emergency use.

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 for subsequent recycle.
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:

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	:	Wear goggles for use against liquids and gas. Wear full face shield if splashes are likely to occur. 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. Incidental contact/Splash protection: Nitrile rubber. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed

and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Skin and body protection : Where risk of splashing or in spillage clean up, use chemical resistant one-piece overall with integral hood.
Wear antistatic and flame-retardant clothing.
Wear chemical and heat resistant gloves and boots. Where risk of splashing, also wear an apron.

Protective clothing approved to EU Standard EN14605.

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.
Select a filter suitable for organic gases and vapours [Type A boiling point > 65°C (149°F)] meeting EN14387.

Thermal hazards : Not applicable

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : Liquid.

Colour : colourless

Odour : characteristic

Odour Threshold : Data not available

Melting / freezing point : -97,5 °C

Boiling point/boiling range : 63,6 - 64,6 °C

Flammability

Flammability (solid, gas) : Not applicable

Lower explosion limit and upper explosion limit / flammability limit

Upper explosion limit / Upper flammability limit : 44 %(V)

Lower explosion limit / Lower flammability limit	:	6,1 %(V)
Flash point	:	10 °C Method: Abel
Auto-ignition temperature	:	455 °C Method: ASTM E-659
Decomposition temperature		
Decomposition temperature	:	Data not available
pH	:	Not applicable
Viscosity		
Viscosity, dynamic	:	0,59 mPa.s (20 °C) Method: ASTM D445
Viscosity, kinematic	:	Data not available
Solubility(ies)		
Water solubility	:	Completely miscible. (20 °C)
Partition coefficient: n-octanol/water	:	log Pow: < 0
Vapour pressure	:	13,1 kPa (20 °C)
		55,7 kPa (50 °C)
Relative density	:	Data not available
Density	:	791 - 792 kg/m3 (20 °C) Method: ASTM D4052
Relative vapour density	:	Data not available
Particle characteristics		
Particle size	:	Data not available

9.2 Other information

Explosive properties	:	Not applicable
Oxidizing properties	:	Data not available
Evaporation rate	:	1,9 Method: ASTM D 3539, nBuAc=1
		6,3

		Method: DIN 53170, di-ethyl ether=1
Conductivity	:	Electrical conductivity: > 10,000 pS/m, A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid, This material is not expected to be a static accumulator.
Surface tension	:	22,6 mN/m, 20 °C
Molecular weight	:	32 g/mol

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

No hazardous reaction is expected when handled and stored according to provisions

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.
Prevent vapour accumulation.
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

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

Components:

Methanol:

Acute oral toxicity : Acute toxicity estimate: 100 mg/kg bw
Remarks: Expert judgement

LD 50 (Rat): >= 1187 - 2769 mg/kg bw
Method: Test(s) equivalent or similar to OECD Test Guideline 401
Remarks: Toxic if swallowed.
There is a marked difference in acute oral toxicity between animals and man, man being more susceptible than animals.
The estimated fatal dose for man is 100 milliliters (1/2 cup).

Acute inhalation toxicity : Acute toxicity estimate: 3 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Remarks: Expert judgement

LC 50 (Cat): 43,7 mg/l
Exposure time: 6 h
Test atmosphere: vapour
Method: Acceptable non-standard method.
Remarks: Toxic if inhaled.

Acute dermal toxicity : Acute toxicity estimate: 300 mg/kg bw
Remarks: Expert judgement

LD50 Dermal (Rabbit): 17100 mg/kg bw
Remarks: Toxic in contact with skin.

Skin corrosion/irritation

Components:

Methanol:

Species : Rabbit
Method : Acceptable non-standard method.
Remarks : Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Components:

Methanol:

Species : Rabbit
Method : Acceptable non-standard method.
Remarks : Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Components:

Methanol:

Species	:	Guinea pig
Method	:	Test(s) equivalent or similar to OECD Test Guideline 406
Remarks	:	Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Components:

Methanol:

Genotoxicity in vitro	:	Method: OECD Test Guideline 471 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. Method: Literature data 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. Species: Mouse Method: Literature data 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

Components:

Methanol:

Species	:	Mouse, male and female
Application Route	:	Inhalation
Method	:	Test(s) equivalent or similar to OECD Test Guideline 453
Remarks	:	Based on available data, the classification criteria are not met.
Species	:	Rat, male and female

Application Route	:	Inhalation
Method	:	Test(s) equivalent or similar to OECD Test Guideline 453
Remarks	:	Based on available data, the classification criteria are not met.
Carcinogenicity - Assessment	:	This product does not meet the criteria for classification in categories 1A/1B.

Material	GHS/CLP Carcinogenicity Classification
Methanol	No carcinogenicity classification.

Reproductive toxicity

Components:

Methanol:

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

STOT - single exposure

Components:

Methanol:

Exposure routes	:	Oral, Inhalation, Dermal
Target Organs	:	Central nervous system, optic nerve
Remarks	:	Causes damage to organs. High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death. Visual system: may cause marked impairment of vision or blindness.

STOT - repeated exposure

Components:

Methanol:

Remarks	:	Visual system: may cause decreased color perception. Based on available data, the classification criteria are not met.

Repeated dose toxicity

Components:

Methanol:

Species	:	Monkey, male
Application Route	:	Oral
Method	:	Literature data
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 453
Target Organs	:	No specific target organs noted

Aspiration toxicity

Components:

Methanol:

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

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

Components:

Methanol:

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

SECTION 12: Ecological information

12.1 Toxicity

Components:

Methanol:

Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 15.400 mg/l Exposure time: 96 h Method: Other guideline method. Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/l
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 18.260 mg/l Exposure time: 96 h Method: OECD Test Guideline 202 Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/l
Toxicity to algae/aquatic plants	:	EC50 (Selenastrum capricornutum (green algae)): 22.000 mg/l Exposure time: 96 h Method: OECD Test Guideline 201 Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/l
Toxicity to microorganisms	:	IC50 (Activated sludge): > 1.000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/l
Toxicity to fish (Chronic toxicity)	:	NOEC: 7.900 mg/l Exposure time: 200 d Species: Oryzias latipes (Japanese medaka) Method: Other guideline method. Remarks: NOEC/NOEL > 100 mg/l
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 208 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: Based on quantitative structure-activity relationship (QSAR) modelling Remarks: NOEC/NOEL > 100 mg/l

12.2 Persistence and degradability

Product:

Biodegradability	:	Remarks: Not Persistent per IMO criteria. International Oil Pollution Compensation (IOPC) Fund definition: “A non-persistent oil is oil, which, at the time of shipment, consists

of hydrocarbon fractions, (a) at least 50% of which, by volume, distills at a temperature of 340ºC (645ºF) and (b) at least 95% of which, by volume, distils at a temperature of 370ºC (700ºF) when tested by the ASTM Method D-86/78 or any subsequent revision thereof."

Components:

Methanol:

Biodegradability : Biodegradation: 82,7 %
Exposure time: 5 d
Method: Other guideline method.
Remarks: Readily biodegradable.
Oxidises rapidly by photo-chemical reactions in air.

12.3 Bioaccumulative potential

Components:

Methanol:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Exposure time: 72 h
Bioconcentration factor (BCF): 1
Method: Test(s) equivalent or similar to OECD Test Guideline 305
Remarks: Does not bioaccumulate significantly.

12.4 Mobility in soil

Components:

Methanol:

Mobility : Remarks: If product enters soil, it will be highly mobile and may contaminate groundwater.

12.5 Results of PBT and vPvB assessment

Components:

Methanol:

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.
Do not dispose into the environment, in drains or in water courses.
Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment.
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.

Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand.

SECTION 14: Transport information

14.1 UN number or ID number

ADN : 1230

ADR : 1230

RID : 1230

IMDG : 1230
IATA : 1230

14.2 UN proper shipping name

ADN : METHANOL

ADR : METHANOL

RID : METHANOL

IMDG : METHANOL

IATA : Methanol

14.3 Transport hazard class(es)

ADN : 3

ADR : 3

RID : 3

IMDG : 3
IATA : 3

14.4 Packing group

ADN
Packing group : II
Classification Code : FT1
Labels : 3 (6.1)
CDNI Inland Water Waste Agreement : NST 8192 Methanol

ADR
Packing group : II
Classification Code : FT1
Hazard Identification Number : 336
Labels : 3 (6.1)

RID
Packing group : II
Classification Code : FT1
Hazard Identification Number : 336
Labels : 3 (6.1)

IMDG
Packing group : II
Labels : 3 (6.1)

IATA
Packing group : II
Labels : 3 (6.1)

14.5 Environmental hazards

ADN
Environmentally hazardous : no

ADR
Environmentally hazardous : no

RID
Environmentally hazardous : no

IMDG
Marine pollutant : no

14.6 Special precautions for user

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

14.7 Maritime transport in bulk according to IMO instruments

Pollution category : Y
Ship type : 3
Product name : Methanol

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

SECTION 15: Regulatory information

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

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).

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

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

Other regulations:

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

Product is subject to Stoerfallverordnung (StFV).

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

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

15.2 Chemical safety assessment

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

SECTION 16: Other information

Full text of other abbreviations

CH BAT	:	Switzerland. List of BAT-values
CH SUVA	:	Switzerland. Limit values at the work place
CH SUVA / TWA	:	Time Weighted Average
CH SUVA / STEL	:	Short Term Exposure Limit

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) Ef-

fect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

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

Identified Uses according to the Use Descriptor System

Uses - Worker

Title : Manufacture of substance
- Industrial

Uses - Worker

Title : Use as an intermediate
- Industrial

Uses - Worker

Title : Distribution of substance
- Industrial

Uses - Worker

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

Uses - Worker

Title : Use in Cleaning Agents
- Industrial

Uses - Worker
Title : Use in Cleaning Agents
- Professional

Uses - Worker
Title : Use as a fuel
- Industrial

Uses - Worker
Title : Use as a fuel
- Professional

Uses - Worker
Title : Use in laboratories
- Industrial

Uses - Worker
Title : Use in laboratories
- Professional

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

Uses - Consumer
Title : Use as a fuel
- Consumer

Uses - Consumer
Title : De-icing and anti-icing applications
- 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

300000000552	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Manufacture of substance- Industrial
Use Descriptor	**Sector of Use**: SU 3, SU8, SU9 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 15 **Environmental Release Categories**: ERC1, ERC4
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 > 10 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General exposures (closed systems)	No specific measures identified.
General exposures (closed systems)with sample collectionGeneral measures (skin irritants).	Provide extraction ventilation at points where emissions occur.
General exposures (closed systems)Use in contained batch processes	Provide extraction ventilation at points where emissions occur.
General exposures (open systems)Batch processwith sample collection	Provide extraction ventilation at points where emissions occur.
Process sampling	Provide extraction ventilation at points where emissions occur.
Laboratory activities	Handle in a fume cupboard or under extract ventilation.
Bulk transfers(open sys-	Ensure material transfers are under containment or extract

tems)with potential for aerosol generation.	ventilation.
Bulk transfers(closed systems)	Ensure material transfers are under containment or extract ventilation.
Equipment cleaning and maintenance	Drain down and flush system prior to equipment opening or maintenance.
Storage.General measures (skin irritants).	Provide extraction ventilation at points where emissions occur.
Section 2.2	**Control of Environmental Exposure**
No exposure assessment presented for the environment.	

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

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

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	

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

Exposure Scenario - Worker

300000000554	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use as an intermediate- Industrial
Use Descriptor	**Sector of Use**: SU 3, SU8, SU9 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 15 **Environmental Release Categories**: ERC6a
Scope of process	Use of substance as an intermediate (not related to Strictly Controlled Conditions). Includes recycling/ recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Section 2.1	**Control of Worker Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure > 10 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General exposures (closed systems)	No specific measures identified.
General exposures (closed systems)with sample collectionGeneral measures (skin irritants).	Provide extraction ventilation at points where emissions occur.
General exposures (closed systems)Use in contained batch processes	Provide extraction ventilation at points where emissions occur.
General exposures (open systems)Batch processwith sample collection	Provide extraction ventilation at points where emissions occur.
Process sampling	Provide extraction ventilation at points where emissions occur.
Laboratory activities	Handle in a fume cupboard or under extract ventilation.
Bulk transfers(open sys-	Ensure material transfers are under containment or extract

tems)with potential for aerosol generation.	ventilation.
Bulk transfers(closed systems)	Ensure material transfers are under containment or extract ventilation.
Equipment cleaning and maintenance	Drain down and flush system prior to equipment opening or maintenance.
Storage.General measures (skin irritants).	Provide extraction ventilation at points where emissions occur.
Section 2.2	**Control of Environmental Exposure**
No exposure assessment presented for the environment.	

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

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

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	

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

Exposure Scenario - Worker

300000000556	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Distribution of substance- Industrial
Use Descriptor	**Sector of Use**: SU 3, SU8, SU9 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 9, PROC 15 **Environmental Release Categories**: ERC1, ERC2, ERC3, ERC4, ERC5, ERC6a, ERC7
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 > 10 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General exposures (closed systems)	No other specific measures identified.
General exposures (closed systems)with sample collectionGeneral measures (skin irritants).	No other specific measures identified.
General exposures (closed systems)Use in contained batch processes	No other specific measures identified.
General exposures (open systems)Batch processwith sample collection	Provide extraction ventilation at points where emissions occur.
Product sampling.	Provide extraction ventilation at points where emissions occur.
Laboratory activities	Provide extraction ventilation at points where emissions occur.

Bulk transfers(closed systems)	Ensure material transfers are under containment or extract ventilation.
Bulk transfers(open systems)	Ensure material transfers are under containment or extract ventilation.
Drum and small package filling	Provide extraction ventilation at points where emissions occur.
Equipment cleaning and maintenance	Drain down and flush system prior to equipment opening or maintenance.
Storage.	Store substance within a closed system.
Section 2.2	**Control of Environmental Exposure**
No exposure assessment presented for the environment.	

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

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

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	

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

Exposure Scenario - Worker

300000000560	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Formulation & (re)packing of substances and mixtures- Industrial
Use Descriptor	**Sector of Use**: SU 3, SU 10 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 5, PROC 8a, PROC 8b, PROC 9, PROC 14, PROC 15 **Environmental Release Categories**: ERC2
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 > 10 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
General exposures (closed systems)	No other specific measures identified.
General exposures (closed systems)with sample collectionGeneral measures (skin irritants).	No other specific measures identified.
General exposures (closed systems)Use in contained batch processes	No other specific measures identified.
General exposures (open systems)Batch processwith sample collectionwith potential for aerosol generation.	Provide extraction ventilation at points where emissions occur.
Batch processes at elevated temperatures	Provide extraction ventilation at points where emissions occur.

Process sampling	Provide extraction ventilation at points where emissions occur.
Laboratory activities	Handle in a fume cupboard or under extract ventilation.
Bulk transfers	Provide extraction ventilation at points where emissions occur.
Mixing operations (open systems)with potential for aerosol generation.	Provide extraction ventilation at points where emissions occur.
ManualTransfer from/pouring from containers	Provide extraction ventilation at points where emissions occur.
Drum/batch transfers	Provide extraction ventilation at points where emissions occur.
Production or preparation or articles by tabletting, compression, extrusion or pelletisation	Provide extraction ventilation at points where emissions occur.
Drum and small package filling	Ensure material transfers are under containment or extract ventilation.
Equipment cleaning and maintenance	Drain down and flush system prior to equipment opening or maintenance.
Storage.	Store substance within a closed system.
Section 2.2	**Control of Environmental Exposure**
No exposure assessment presented for the environment.	

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

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

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	

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

Exposure Scenario - Worker

300000000565	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in Cleaning Agents- Industrial
Use Descriptor	**Sector of Use**: SU 3 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 7, PROC 8a, PROC 8b, PROC 10, PROC 13 **Environmental Release Categories**: ERC4
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 > 10 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
Bulk transfers	Ensure material transfers are under containment or extract ventilation.
Automated process with (semi) closed systems.Use in contained systems	Ensure material transfers are under containment or extract ventilation.
Automated process with (semi) closed systems.Use in contained systems	Ensure material transfers are under containment or extract ventilation.
Application of cleaning products in closed systemsUse in contained systems	Ensure material transfers are under containment or extract ventilation.
Filling/ preparation of equipment from drums or containers.Dedicated facility	Ensure material transfers are under containment or extract ventilation.

Use in contained batch processesTreatment by heating	Provide the operation with a properly sited receiving hood.
Degreasing small objects in cleaning station	Provide the operation with a properly sited receiving hood.
Cleaning with low-pressure washers	Provide the operation with a properly sited receiving hood.
Cleaning with high pressure washers	Carry out in a vented booth or extracted enclosure. Stay upwind/ keep distance from source. Clean equipment and the work area every day. Ensure control measures are regularly inspected and maintained.
CleaningManualSurfacesno spraying	Provide the operation with a properly sited receiving hood.
Equipment cleaning and maintenance	Ensure material transfers are under containment or extract ventilation.
Storage.Product sampling.	Ensure material transfers are under containment or extract ventilation.
Section 2.2	**Control of Environmental Exposure**
No exposure assessment presented for the environment.	

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

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

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	

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

Exposure Scenario - Worker

300000000566	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in Cleaning Agents- Professional
Use Descriptor	**Sector of Use**: SU 22 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 4, PROC 8a, PROC 8b, PROC 10, PROC 11, PROC 13 **Environmental Release Categories**: ERC8a, ERC8d
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 > 10 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
Filling/ preparation of equipment from drums or containers.Dedicated facility	Limit the substance content in the product to 5 %. , or: Ensure material transfers are under containment or extract ventilation.
Automated process with (semi) closed systems.Use in contained systems	Provide the operation with a properly sited receiving hood.
Automated process with (semi) closed systems.Use in contained systemsDrum/batch transfers	Provide the operation with a properly sited receiving hood.
Semi Automated process. (e.g.: Semi automatic application of floor care and maintenance products)	Provide the operation with a properly sited receiving hood. Avoid carrying out activities involving exposure for more than 4 hours
Filling/ preparation of equipment from drums or containers.Non-dedicated facility	Limit the substance content in the product to 5 %. , or: Ensure material transfers are under containment or extract

	ventilation.
Dipping, immersion and pouring-ManualCleaningSurfaces	Provide the operation with a properly sited receiving hood.
Cleaning with low-pressure washersRolling, Brushingno spraying	Limit the substance content in the product to 5 %.
Cleaning with high pressure washersSpraying	Limit the substance content in the product to 5 %. Avoid carrying out activities involving exposure for more than 4 hours Use long handled tools where possible. Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
SprayingManualSurfacesCleaning	Limit the substance content in the product to 5 %. , or: Provide the operation with a properly sited receiving hood.
Ad hoc manual application via trigger sprays, dipping, etc.Rolling, Brushing	Limit the substance content in the product to 5 %. , or: Provide the operation with a properly sited receiving hood.
Ad hoc manual application via trigger sprays, dipping, etc.Rolling, Brushing	Limit the substance content in the product to 5 %.
Application of cleaning products in closed systems	Ensure material transfers are under containment or extract ventilation. Avoid carrying out activities involving exposure for more than 4 hours
Cleaning of medical devices	Provide the operation with a properly sited receiving hood. Avoid carrying out activities involving exposure for more than 4 hours
Equipment cleaning and maintenance	Limit the substance content in the product to 5 %.
Storage.General measures (skin irritants).	Ensure material transfers are under containment or extract ventilation.

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

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

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

SECTION 4	GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO

Section 4.1 - Health

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

Section 4.2 -Environment

No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000562	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use as a fuel- Industrial
Use Descriptor	**Sector of Use**: SU 3, SU 10 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 8a, PROC 8b, PROC 16 **Environmental Release Categories**: ERC7
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 > 10 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
Bulk transfers	No other specific measures identified.
Drum/batch transfers	Provide extraction ventilation at points where emissions occur.
General exposures (closed systems)	No other specific measures identified.
General exposures (closed systems)General measures (skin irritants).	Provide extraction ventilation at points where emissions occur.
General exposures (closed systems)Batch process	Provide extraction ventilation at points where emissions occur.
Use as a fuel(closed systems)	No other specific measures identified.
Equipment cleaning and maintenance	Drain down and flush system prior to equipment opening or maintenance.
Storage.	Store substance within a closed system.

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

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

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

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	

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

Exposure Scenario - Worker

300000000563	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use as a fuel- Professional
Use Descriptor	**Sector of Use**: SU 22 **Process Categories**: PROC 1, PROC 2, PROC 3, PROC 8a, PROC 8b, PROC 16 **Environmental Release Categories**: ERC9a, ERC9b
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 > 10 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
Drum/batch transfersDedicated facility	Avoid carrying out activities involving exposure for more than 1 hour.
Bulk transfersDedicated facility	Avoid carrying out activities involving exposure for more than 1 hour.
General exposures (closed systems)	No other specific measures identified.
General exposures (closed systems)General measures (skin irritants).	No other specific measures identified.
General exposures (closed systems)Batch process	No other specific measures identified.
Use as a fuel(closed systems)	No other specific measures identified.
Equipment cleaning and maintenance	Drain down system prior to equipment opening or maintenance. Avoid carrying out activities involving exposure for more than 1 hour.

Storage.	Store substance within a closed system.

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

SECTION 3	**EXPOSURE ESTIMATION**

Section 3.1 - Health

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

Section 3.2 -Environment

No exposure assessment presented for the environment.

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

Section 4.1 - Health

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

Section 4.2 -Environment

No exposure assessment presented for the environment.

Exposure Scenario - Worker

300000000567	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in laboratories- Industrial
Use Descriptor	**Sector of Use**: SU 3, SU 10 **Process Categories**: PROC 10, PROC 15 **Environmental Release Categories**: 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 > 10 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
Laboratory activities	Handle in a fume cupboard or under extract ventilation.
CleaningRolling, BrushingVessel and container cleaning	Handle in a fume cupboard or under extract ventilation.
Section 2.2	**Control of Environmental Exposure**
No exposure assessment presented for the environment.	

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

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

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

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

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

Exposure Scenario - Worker

300000000568	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in laboratories- Professional
Use Descriptor	**Sector of Use**: SU 22 **Process Categories**: PROC 10, PROC 15 **Environmental Release Categories**: ERC8a
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 > 10 kPa at STP
Concentration of the Substance in Mixture/Article	Covers use of substance/product up to 100% (unless stated differently).,
Frequency and Duration of Use	
Covers daily exposures up to 8 hours (unless stated differently).	
Other Operational Conditions affecting Exposure	
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.	
Contributing Scenarios	**Risk Management Measures**
Laboratory activities	Handle in a fume cupboard or under extract ventilation.
CleaningRolling, BrushingVessel and container cleaning	Handle in a fume cupboard or under extract ventilation.
Section 2.2	**Control of Environmental Exposure**
No exposure assessment presented for the environment.	

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

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

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

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

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

Exposure Scenario - Consumer

300000001067	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use in Cleaning Agents - Consumer
Use Descriptor	**Sector of Use**: SU 21 **Product Categories**: PC35 **Environmental Release Categories**: ERC8a, ERC8d
Scope of process	Covers general exposures to consumers arising from the use of household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air care products.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Section 2.1	**Control of Consumer Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure > 10 Pa
Concentration of the Substance in Mixture/Article	Covers concentration up to (%): 5 %
Amounts Used	
for each use event, covers amount up to (g):	100
Frequency and Duration of Use	
Covers use up to (days/year):	365
Exposure (hours/event):	2,00
Other Operational Conditions affecting Exposure	
Covers use at ambient temperatures.	
Covers use in a one car garage (34 m3) under typical ventilation.	

Product Categories	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Washing and cleaning products (including solvent based products) Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners).	Covers concentrations up to 2,5 %
	covers use up to 102 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 1.900 cm2
	For each use event, covers amount up to 100 g
	Covers use in a one car garage (34 m3) under typical ventilation.
	Covers exposure up to 2,00 hours/event

Washing and cleaning products (including solvent based products) Cleaners, trigger sprays (all purpose cleaners,sanitary products, glass cleaners).	Covers concentrations up to 5 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 960 cm2
	For each use event, covers amount up to 16,2 g
	Covers use in a one car garage (34 m3) under typical ventilation.
	Covers exposure up to 1,00 hours/event

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

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

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

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	

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

Exposure Scenario - Consumer

300000001066	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	Use as a fuel - Consumer
Use Descriptor	**Sector of Use**: SU 21 **Product Categories**: PC13 **Environmental Release Categories**: ERC9a, ERC9b
Scope of process	Covers consumer uses in liquid fuels.

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Section 2.1	**Control of Consumer Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure > 10 Pa
Concentration of the Sub-stance in Mixture/Article	Covers concentration up to (%): 100 %
Amounts Used	
for each use event, covers amount up to (g):	37.500
Frequency and Duration of Use	
Covers use up to (days/year):	104
Exposure (hours/event):	0,05
Other Operational Conditions affecting Exposure	
Covers use at ambient temperatures.	
Covers use in room size of 20m3	
Covers use under typical household ventilation.	
Product Categories	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Fuels Liquid: Automotive Refuelling.	Covers concentrations up to 100 %
	covers use up to 104 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 210 cm2
	For each use event, covers amount up to 37.500 g
	Covers outdoor use.
	Covers use in room size of 100 m3
	Covers exposure up to 0,05 hours/event
Fuels	Covers concentrations up to 80 %
	covers use up to 104 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 210 cm2
	For each use event, covers amount up to 800 g
	Covers outdoor use.

	Covers use in room size of 20 m3
	Covers exposure up to 0,01 hours/event

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

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

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

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	

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

Exposure Scenario - Consumer

300000001068	
SECTION 1	**EXPOSURE SCENARIO TITLE**
Title	De-icing and anti-icing applications - Consumer
Use Descriptor	**Sector of Use**: SU 21 **Product Categories**: PC4 **Environmental Release Categories**: ERC8a, ERC8d
Scope of process	Use in de-icing and anti-icing fluids

SECTION 2	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Additional Information	No exposure assessment presented for the environment.
Section 2.1	**Control of Consumer Exposure**
Product Characteristics	
Physical form of product	Liquid, vapour pressure > 10 Pa
Concentration of the Substance in Mixture/Article	Unless stated otherwise.
	Covers concentration up to (%): 0,59 %
Amounts Used	
Unless stated otherwise.covers amount up to (g):	100
Frequency and Duration of Use	
Unless stated otherwise.Covers use up to (days/year):	365
for each use eventExposure (hours/event):	2,00
Other Operational Conditions affecting Exposure	
Unless stated otherwise. Covers use at ambient temperatures. Covers use in a one car garage (34 m3) under typical ventilation.	

Product Categories	**OPERATIONAL CONDITIONS AND RISK MANAGEMENT MEASURES**
Anti-Freeze and de-icing products Washing car window.	Covers concentrations up to 0,59 %
	covers use up to 104 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 1.900 cm2
	For each use event, covers amount up to 100 g
	Covers use in a one car garage (34 m3) under typical ventilation.
	for each use event Covers exposure up to 4,00 hours/event
Anti-Freeze and de-icing products Lock de-icer.	Covers concentrations up to 0,59 %
	covers use up to 365 day/year
	Covers use up to 1 times/day of use
	covers skin contact area up to (cm2): 960 cm2

	For each use event, covers amount up to 16,2 g
	Covers use in a one car garage (34 m3) under typical ventilation.
	for each use event Covers exposure up to 1,00 hours/event

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

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

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

SECTION 4	**GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO**
Section 4.1 - Health	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.	

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