

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

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

1.1 Product identifier

Trade name

GASOLINE

Registration number (REACH)

not relevant (mixture)

1.1.6 Unique formula identifier (UFI)

Q300-303Y-S00H-CCEA

Other means of identification

Alternative name(s)

Gasoline Octane > 95 < 98, Gasoline Octane > 98 / Superplus, Euro 95, Eurobob UMS (Unleaded Motor Spirit), MoGas (Motor Gasoline), Blue one 95, Base ethanolable, SP98

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

Relevant identified uses

Fuels
Distribution

1.3 Details of the supplier of the safety data sheet

VARO Energy Netherlands B.V.
World Port Center | Wilhelminakade 919
3072 AP Rotterdam
Netherlands

Telephone: +31 (0)881007000
HSE@varoenergy.com

e-mail (competent person)

HSE@varoenergy.com

1.4 Emergency telephone number

Country	Name	Telephone
Netherlands	Nationaal Vergiftigingen Informatie Centrum (UMC Utrecht) Uitsluitend bestemd om professionele hulpverleners te informeren bij acute vergiftigingen	+31 88 755 8000

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Section	Hazard class	Category	Hazard class and category	Hazard statement
2.6	flammable liquid	1	Flam. Liq. 1	H224
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.5	germ cell mutagenicity	1B	Muta. 1B	H340
3.6	carcinogenicity	1B	Carc. 1B	H350
3.7	reproductive toxicity	2	Repr. 2	H361d

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
3.8D	specific target organ toxicity - single exposure (narcotic effects, drowsiness)	3	STOT SE 3	H336
3.10	aspiration hazard	1	Asp. Tox. 1	H304
4.1C	hazardous to the aquatic environment - chronic hazard	2	Aquatic Chronic 2	H411

For full text of H-phrases: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources. Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

- signal word Danger

- pictograms

GHS02, GHS07,
GHS08, GHS09



- hazard statements

H224 Extremely flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H340 May cause genetic defects.
H350 May cause cancer.
H361d Suspected of damaging the unborn child.
H411 Toxic to aquatic life with long lasting effects.

- precautionary statements

P201 Obtain special instructions before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331 Do NOT induce vomiting.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

- hazardous ingredients for labelling

Contains: Gasoline; 2-ethoxy-2-methylpropane; tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane].

2.3 Other hazards

Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of $\geq 0,1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture).

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to 1272/2008/EC	Pictograms	Notes
Gasoline	CAS No 86290-81-5 EC No 289-220-8 Index No 649-378-00-4 REACH Reg. No 01-2119494189-23-xxxx	≤ 100	Flam. Liq. 1 / H224 Skin Irrit. 2 / H315 Muta. 1B / H340 Carc. 1B / H350 Repr. 2 / H361d STOT SE 3 / H336 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411	   	GHS- HC IOELV P(a)
Methyl tert-butyl ether [MTBE]	CAS No 1634-04-4 EC No 216-653-1 Index No 603-181-00-X REACH Reg. No 01-2119452786-27-xxxx	≤ 20	Flam. Liq. 2 / H225 Skin Irrit. 2 / H315	 	IOELV
2-ethoxy-2-methyl-propane	CAS No 637-92-3 EC No 211-309-7 REACH Reg. No 01-2119452785-29-xxxx	≤ 20	Flam. Liq. 2 / H225 STOT SE 3 / H336	 	

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

Name of substance	Identifier	Wt%	Classification acc. to 1272/2008/EC	Pictograms	Notes
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane]	CAS No 994-05-8 EC No 213-611-4 Index No 603-213-00-2 REACH Reg. No 01-2119453236-41-xxxx	≤ 15	Flam. Liq. 2 / H225 Acute Tox. 4 / H302 STOT SE 3 / H336	 	
Ethanol	CAS No 64-17-5 EC No 200-578-6 Index No 603-002-00-5 REACH Reg. No 01-2119457610-43-xxxx	≤ 10	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319	 	GHS-HC

Notes

GHS- Harmonised classification (the classification of the substance corresponds to the entry in the list according to
HC: 1272/2008/EC, Annex VI)
IOELV: Substance with a community indicative occupational exposure limit value
P(a): The classification as a carcinogen or mutagen is mandatory. The substance contains at least 0,1 % w/w benzene (EINECS No 200-753-7)

Name of substance	Identifier	Specific Conc. Limits	M-Factors	ATE	Exposure route
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane]	CAS No 994-05-8 EC No 213-611-4	-	-	500 mg/kg	oral
Ethanol	CAS No 64-17-5 EC No 200-578-6	Eye Irrit. 2; H319: C ≥ 50 %	-	-	

Remarks

For full text of H-phrases: see SECTION 16. All the percentages given are percentages by weight unless stated otherwise.
Benzene ≥ 0.1% w/w; toluene ≥ 3% w/w; n-hexane ≥ 3% w/w.

SAFETY DATA SHEET

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Replaces version of 14.12.2021 (1.1) SDS02

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. In case of unconsciousness place person in the recovery position. Never give anything by mouth. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician.

Following skin contact

Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

Following eye contact

Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Call a POISON CENTER or doctor if you feel unwell. Observe aspiration hazard if vomiting occurs. Immediately call a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Delayed effects can be expected after short or long-term exposure. Narcotic effects. Nausea. Dizziness. Death following aspiration.

4.3 Indication of any immediate medical attention and special treatment needed

For specialist advice physicians should contact the poison centre.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water mist; Dry extinguishing powder; Carbon dioxide (CO₂); Alcohol resistant foam

Unsuitable extinguishing media

Water jet.

5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours may form explosive mixtures with air. Danger of bursting container. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

Hazardous combustion products

During fire hazardous fumes/smoke could be produced. Nitrogen oxides (NO_x). Carbon monoxide (CO). Carbon dioxide (CO₂).

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with

SAFETY DATA SHEET

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GASOLINE

Version number: 2.0. Revision: 01.12.2023
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normal precautions from a reasonable distance.

Special protective equipment for firefighters

Self-contained breathing apparatus (EN 133). Standard protective clothing for firefighters.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety. Ventilate affected area. In case of fire: Stop leak if safe to do so. Eliminate all ignition sources if safe to do so. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases. Personal protective equipment: see section 8.

6.2 Environmental precautions

Keep away from drains, surface and ground water. If substance has entered a water course or sewer, inform the responsible authority. Collect contaminated firefighting water separately.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Collect spillage. Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.). Use explosion-proof electrical/ventilating/lighting/equipment.

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- measures to prevent fire as well as aerosol and dust generation

Use only outdoors or in a well-ventilated area. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use local and general ventilation. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Collect spillage.

- specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Vapours may form explosive mixtures with air. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Keep away from food, drink and animal feedingstuffs. Personal protective equipment: see section 8.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

- flammability hazards

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from sunlight. Ground/bond container and receiving equipment.

- incompatible substances or mixtures

Incompatible materials: see section 10.

Control of effects

Protect against external exposure, such as

High temperatures. UV-radiation/sunlight.

Consideration of other advice

Store in a well-ventilated place. Keep container tightly closed.

- ventilation requirements

Use local and general ventilation. Ground/bond container and receiving equipment.

- packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

There is no additional information.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
EU	toluene	108-88-3	IOEL V	50	192	100	384			H	2006/15/EC
EU	n-hexane	110-54-3	IOEL V	20	72						2006/15/EC
EU	tert-butyl methyl ether	1634-04-4	IOEL V	50	183,5	100	367				2009/161/EU

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Ceiling-C [ppm]	Ceiling-C [mg/m³]	Notation	Source
EU	benzene	71-43-2	IOEL V	1	3,25					H	2022/431/EU
NL	petrol		GW	50	240	100	480				SC-SZW
NL	toluene	108-88-3	GW	39	150	100	384				SC-SZW
NL	n-hexane	110-54-3	GW	20	72	40	144				SC-SZW
NL	tert-butyl methyl ether	1634-04-4	GW	49	180	98	360				SC-SZW
NL	ethanol	64-17-5	GW	137	260	1.000	1.900			H	SC-SZW
NL	benzene	71-43-2	GW	0,2	0,7					H	SC-SZW

Notation

Ceiling-C ceiling value is a limit value above which exposure should not occur
H absorbed through the skin
STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Remarks

Benzene-limit EU (2022/431/EU): Limit value 1 ppm (3,25 mg/m³) until 5 April 2024. Limit value 0,5 ppm (1,65 mg/m³) from 5 April 2024 until 5 April 2026.

Relevant DNELs/DMELs/PNECs and other threshold levels

Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Methyl tert-butyl ether [MTBE]	1634-04-4	DNEL	178,5 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Methyl tert-butyl ether [MTBE]	1634-04-4	DNEL	357 mg/m³	human, inhalatory	worker (industry)	acute - local effects
Methyl tert-butyl ether [MTBE]	1634-04-4	DNEL	5.100 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Methyl tert-butyl ether [MTBE]	1634-04-4	DNEL	53,6 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects

SAFETY DATA SHEET

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GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Methyl tert-butyl ether [MTBE]	1634-04-4	DNEL	214 mg/m ³	human, inhalatory	consumer (private households)	acute - local effects
Methyl tert-butyl ether [MTBE]	1634-04-4	DNEL	3.570 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
Methyl tert-butyl ether [MTBE]	1634-04-4	DNEL	7,1 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
2-ethoxy-2-methylpropane	637-92-3	DNEL	352 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
2-ethoxy-2-methylpropane	637-92-3	DNEL	2.800 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
2-ethoxy-2-methylpropane	637-92-3	DNEL	105 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
2-ethoxy-2-methylpropane	637-92-3	DNEL	6.767 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
2-ethoxy-2-methylpropane	637-92-3	DNEL	105 mg/m ³	human, inhalatory	consumer (private households)	chronic - systemic effects
2-ethoxy-2-methylpropane	637-92-3	DNEL	1.680 mg/m ³	human, inhalatory	consumer (private households)	acute - systemic effects
2-ethoxy-2-methylpropane	637-92-3	DNEL	63 mg/m ³	human, inhalatory	consumer (private households)	chronic - local effects
2-ethoxy-2-methylpropane	637-92-3	DNEL	4.060 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
2-ethoxy-2-methylpropane	637-92-3	DNEL	6 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane]	994-05-8	DNEL	88,8 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane]	994-05-8	DNEL	353,3 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane]	994-05-8	DNEL	1.601 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane]	994-05-8	DNEL	26,5 mg/m ³	human, inhalatory	consumer (private households)	chronic - systemic effects

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
tert-Amyl methyl ether [TAME or 2-methoxy-2-methyl-bentane]	994-05-8	DNEL	212 mg/m ³	human, inhalatory	consumer (private households)	acute - systemic effects
tert-Amyl methyl ether [TAME or 2-methoxy-2-methyl-bentane]	994-05-8	DNEL	961 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
tert-Amyl methyl ether [TAME or 2-methoxy-2-methyl-bentane]	994-05-8	DNEL	1 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
Ethanol	64-17-5	DNEL	1.900 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
Ethanol	64-17-5	DNEL	950 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Ethanol	64-17-5	DNEL	343 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Ethanol	64-17-5	DNEL	114 mg/m ³	human, inhalatory	consumer (private households)	chronic - systemic effects
Ethanol	64-17-5	DNEL	206 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
Ethanol	64-17-5	DNEL	87 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects

Relevant PNECs of components						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Methyl tert-butyl ether [MTBE]	1634-04-4	PNEC	47,2 mg/l	aquatic organisms	water	intermittent release
Methyl tert-butyl ether [MTBE]	1634-04-4	PNEC	5,1 mg/l	aquatic organisms	freshwater	short-term (single instance)
Methyl tert-butyl ether [MTBE]	1634-04-4	PNEC	0,26 mg/l	aquatic organisms	marine water	short-term (single instance)
Methyl tert-butyl ether [MTBE]	1634-04-4	PNEC	71 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Methyl tert-butyl ether [MTBE]	1634-04-4	PNEC	23 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Methyl tert-butyl ether [MTBE]	1634-04-4	PNEC	1,17 mg/kg	aquatic organisms	marine sediment	short-term (single instance)

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

Relevant PNECs of components						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Methyl tert-butyl ether [MTBE]	1634-04-4	PNEC	1,56 mg/kg	terrestrial organisms	soil	short-term (single instance)
2-ethoxy-2-methylpropane	637-92-3	PNEC	11 mg/l	aquatic organisms	water	intermittent release
2-ethoxy-2-methylpropane	637-92-3	PNEC	0,51 mg/l	aquatic organisms	freshwater	short-term (single instance)
2-ethoxy-2-methylpropane	637-92-3	PNEC	0,017 mg/l	aquatic organisms	marine water	short-term (single instance)
2-ethoxy-2-methylpropane	637-92-3	PNEC	12,5 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
2-ethoxy-2-methylpropane	637-92-3	PNEC	2,86 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
2-ethoxy-2-methylpropane	637-92-3	PNEC	0,078 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
2-ethoxy-2-methylpropane	637-92-3	PNEC	0,274 mg/kg	terrestrial organisms	soil	short-term (single instance)
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane]	994-05-8	PNEC	0,51 mg/l	aquatic organisms	freshwater	short-term (single instance)
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane]	994-05-8	PNEC	0,034 mg/l	aquatic organisms	marine water	short-term (single instance)
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane]	994-05-8	PNEC	25 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane]	994-05-8	PNEC	2,99 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane]	994-05-8	PNEC	0,199 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane]	994-05-8	PNEC	0,301 mg/kg	terrestrial organisms	soil	short-term (single instance)
Ethanol	64-17-5	PNEC	2,75 mg/l	aquatic organisms	water	intermittent release

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1. 1) SDS02

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Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Ethanol	64-17-5	PNEC	0,96 mg/l	aquatic organisms	freshwater	short-term (single instance)
Ethanol	64-17-5	PNEC	0,79 mg/l	aquatic organisms	marine water	short-term (single instance)
Ethanol	64-17-5	PNEC	580 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Ethanol	64-17-5	PNEC	3,6 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Ethanol	64-17-5	PNEC	2,9 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Ethanol	64-17-5	PNEC	0,63 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

Use only outdoors or in a well-ventilated area. Use local exhaust ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection (EN 166).

Skin protection



Protective clothing (EN 340 & EN ISO 13688).

Hand protection



Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- type of material

Nitrile rubber

- material thickness

No information available.

- breakthrough time of the glove material

Use gloves with a minimum breakthrough time of the glove material: >480 minutes (permeation: level 6).

- other protection measures

Wash hands thoroughly after handling.

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

Respiratory protection

Do not breathe vapour. Use local and general ventilation. In case of inadequate ventilation wear respiratory protection. Type: AX (gas filters and combined filters against low-boiling point organic compounds, colour code: Brown). At high concentrations (like vessel/ container cleaning) a breathing apparatus must be used (self-contained: SCBA/ fresh air hose breathing apparatus). (concentration oxygen <19.5%: wear self-contained breathing apparatus).

Environmental exposure controls

Take appropriate precautions to avoid uncontrolled release into the environment. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	transparent
Odour	gasoline
Melting point/freezing point	-108,6 °C at 101,3 kPa calculated value, referring to a component of the mixture
Boiling point or initial boiling point and boiling range	25 – 200 °C at 101,3 kPa
Flammability	flammable liquid in accordance with GHS criteria
Lower and upper explosion limit	LEL: 1,4 vol% UEL: 7,6 vol%
Flash point	<-40 °C
Auto-ignition temperature	≥280 °C (auto-ignition temperature (liquids and gases))
Decomposition temperature	no data available
pH (value)	not determined
Kinematic viscosity	<1 cSt at 40 °C
Solubility	not determined

Partition coefficient n-octanol/water (log value)	this information is not available
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Vapour pressure	<240 kPa at 37,8 °C
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Density and/or relative density

Density	0,7 – 0,755 g/cm³ at 15 °C
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SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1. 1) SDS02

Particle characteristics	not relevant (liquid)
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9.2 Other information

Information with regard to physical hazard classes	there is no additional information
Other safety characteristics	there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

The mixture contains reactive substance(s). Risk of ignition.

If heated:

Risk of ignition.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Strong oxidisers.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use local exhaust ventilation.

10.5 Incompatible materials

Oxidisers. Acids.

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

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

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Shall not be classified as acutely toxic.

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

Acute toxicity estimate (ATE) of components			
Name of substance	CAS No	Exposure route	ATE
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylpentane]	994-05-8	oral	500 mg/kg

Acute toxicity of components					
Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Gasoline	86290-81-5	oral	LD50	>5.000 mg/kg	rat
Gasoline	86290-81-5	dermal	LD50	>2.000 mg/kg	rabbit
Methyl tert-butyl ether [MTBE]	1634-04-4	oral	LD50	>2.000 mg/kg	rat
Methyl tert-butyl ether [MTBE]	1634-04-4	inhalation: vapour	LC50	85 mg/l/4h	rat
Methyl tert-butyl ether [MTBE]	1634-04-4	dermal	LD50	>2.000 mg/kg	rat
2-ethoxy-2-methylpropane	637-92-3	oral	LD50	>2.003 mg/kg	rat
2-ethoxy-2-methylpropane	637-92-3	inhalation: vapour	LC50	>5,88 mg/l/4h	rat
2-ethoxy-2-methylpropane	637-92-3	dermal	LD50	>2.000 mg/kg	rabbit
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylpentane]	994-05-8	oral	LD50	2.417 mg/kg	rat
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylpentane]	994-05-8	inhalation: vapour	LC50	>5.400 mg/m ³ /4h	rat
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylpentane]	994-05-8	dermal	LD50	>2.000 mg/kg	rabbit
Ethanol	64-17-5	oral	LD50	10.470 mg/kg	rat
Ethanol	64-17-5	inhalation: vapour	LC50	124,7 mg/l/4h	rat

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

May cause genetic defects.

Carcinogenicity

May cause cancer.

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

Reproductive toxicity

Suspected of damaging the unborn child.

Summary of evaluation of the CMR properties

The product contains substances that are listed on the "SZW-lijst van kankerverwekkende, mutagene en voor de voortplanting giftige stoffen". See section 15 for more information on the ingredients.

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard (aspiration hazard).

May be fatal if swallowed and enters airways.

11.2 Information on other hazards

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of $\geq 0,1\%$.

Other information

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Gasoline	86290-81-5	LL50	8,2 mg/l	fish	96 h
Gasoline	86290-81-5	EL50	4,5 mg/l	aquatic invertebrates	48 h
Gasoline	86290-81-5	NOELR	0,5 mg/l	aquatic invertebrates	48 h
Methyl tert-butyl ether [MTBE]	1634-04-4	LC50	672 mg/l	fish	96 h
Methyl tert-butyl ether [MTBE]	1634-04-4	EC50	472 mg/l	aquatic invertebrates	48 h
2-ethoxy-2-methylpropane	637-92-3	LC50	574 mg/l	fish	96 h
2-ethoxy-2-methylpropane	637-92-3	EC50	110 mg/l	aquatic invertebrates	48 h
2-ethoxy-2-methylpropane	637-92-3	ErC50	1.100 mg/l	algae	72 h
2-ethoxy-2-methylpropane	637-92-3	EbC50	32 mg/l	algae	72 h
2-ethoxy-2-methylpropane	637-92-3	NOEC	25 mg/l	aquatic invertebrates	96 h

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1. 1) SDS02

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
tert-Amyl methyl ether [TAME or 2-methoxy-2-methyl-bentane]	994-05-8	LC50	574 mg/l	fish	96 h
tert-Amyl methyl ether [TAME or 2-methoxy-2-methyl-bentane]	994-05-8	EC50	100 mg/l	aquatic invertebrates	48 h
tert-Amyl methyl ether [TAME or 2-methoxy-2-methyl-bentane]	994-05-8	ErC50	780 mg/l	algae	72 h
tert-Amyl methyl ether [TAME or 2-methoxy-2-methyl-bentane]	994-05-8	NOEC	77 mg/l	algae	72 h
Ethanol	64-17-5	LC50	15.400 mg/l	fish	96 h
Ethanol	64-17-5	EC50	12.700 mg/l	fish	96 h
Ethanol	64-17-5	ErC50	22.000 mg/l	algae	96 h

Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Gasoline	86290-81-5	EL50	10 mg/l	fish	21 d
Gasoline	86290-81-5	EC50	15,41 mg/l	microorganisms	40 h
Gasoline	86290-81-5	NOELR	2,6 mg/l	fish	21 d
Methyl tert-butyl ether [MTBE]	1634-04-4	NOEC	299 mg/l	fish	31 d
Methyl tert-butyl ether [MTBE]	1634-04-4	LOEC	100 mg/l	aquatic invertebrates	21 d
Methyl tert-butyl ether [MTBE]	1634-04-4	growth (EbCx) 10%	710 mg/l	microorganisms	18 h
2-ethoxy-2-methylpropane	637-92-3	EC50	510 mg/l	microorganisms	16 h
2-ethoxy-2-methylpropane	637-92-3	NOEC	51 mg/l	aquatic invertebrates	21 d
2-ethoxy-2-methylpropane	637-92-3	LOEC	100 mg/l	aquatic invertebrates	21 d
2-ethoxy-2-methylpropane	637-92-3	growth (EbCx) 10%	25 mg/l	microorganisms	16 h
tert-Amyl methyl ether [TAME or 2-methoxy-2-methyl-bentane]	994-05-8	EC50	510 mg/l	microorganisms	16 h

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane]	994-05-8	NOEC	51 mg/l	aquatic invertebrates	21 d
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane]	994-05-8	LOEC	100 mg/l	aquatic invertebrates	21 d
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane]	994-05-8	growth (EbCx) 10%	25 mg/l	microorganisms	16 h
Ethanol	64-17-5	EC50	22,6 g/l	algae	10 d
Ethanol	64-17-5	LC50	1.806 mg/l	aquatic invertebrates	10 d
Ethanol	64-17-5	ErC50	675 mg/l	algae	4 d
Ethanol	64-17-5	NOEC	250 mg/l	fish	120 h
Ethanol	64-17-5	growth rate (ErCx) 10%	86 mg/l	algae	4 d

12.2 Persistence and degradability

Degradability of components					
Name of substance	CAS No	Process	Degradation rate	Time	Method
Methyl tert-butyl ether [MTBE]	1634-04-4	oxygen depletion	0 %	28 d	
2-ethoxy-2-methylpropane	637-92-3	oxygen depletion	6,6 %	7 d	
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane]	994-05-8	oxygen depletion	5 %	7 d	
Ethanol	64-17-5	oxygen depletion	69 %	5 d	

12.3 Bioaccumulative potential

Bioaccumulative potential of components				
Name of substance	CAS No	BCF	Log KOW	BOD5/COD
Methyl tert-butyl ether [MTBE]	1634-04-4	1,5	1,06 (pH value: 7, 20 °C)	
2-ethoxy-2-methylpropane	637-92-3		1,48 (pH value: ~7, 25 °C)	
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylbentane]	994-05-8		1,55 (pH value: ~7, 20 °C)	
Ethanol	64-17-5		-0,77	

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0,1\%$.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0.1\%$.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment-relevant information

Solvent reclamation/regeneration.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID/ADN	UN 1203
IMDG-Code	UN 1203
ICAO-TI	UN 1203

14.2 UN proper shipping name

ADR/RID/ADN	GASOLINE
IMDG-Code	GASOLINE
ICAO-TI	Gasoline

14.3 Transport hazard class(es)

ADR/RID/ADN	3
IMDG-Code	3
ICAO-TI	3

14.4 Packing group

ADR/RID/ADN	II
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SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

IMDG-Code	II
ICAO-TI	II
14.5 Environmental hazards	hazardous to the aquatic environment
Environmentally hazardous substance (aquatic environment)	Gasoline
14.6 Special precautions for user	
Provisions for dangerous goods (ADR) should be complied within the premises.	
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	
Not applicable.	
14.8 Additional information for each of the UN Model Regulations	
Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - additional information	
Classification code	F1
Danger label(s)	3, fish and tree
 	
Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	243, 534, 664
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
Transport category (TC)	2
Tunnel restriction code (TRC)	D/E
Hazard identification No	33
Remarks	
Dangers (ADN). N2, CMR, F	
NSTR 3211: Gasoline/ Benzine/ Bensin.	
International Maritime Dangerous Goods Code (IMDG) - additional information	
Marine pollutant	yes (hazardous to the aquatic environment)
Danger label(s)	3, fish and tree
 	
Special provisions (SP)	243
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
EmS	F-E, S-E
Stowage category	E

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1. 1) SDS02

International Civil Aviation Organization (ICAO-IATA/DGR) - additional information

Environmental hazards yes (hazardous to the aquatic environment)

Danger label(s) 3



Special provisions (SP) A100

Excepted quantities (EQ) E2

Limited quantities (LQ) 1 L

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

Name	Name acc. to inventory	CAS No	Restriction	No
GASOLINE	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		R3	3
Ethanol	flammable / pyrophoric		R40	40
Ethanol	substances in tattoo inks and permanent make-up		R75	75
Gasoline	carcinogenic		R28-30	28
Gasoline	germ cell mutagenic (mutagenic)		R28-30	29
Gasoline	flammable / pyrophoric		R40	40
Gasoline	substances in tattoo inks and permanent make-up		R75	75
Methyl tert-butyl ether [MTBE]	flammable / pyrophoric		R40	40
Methyl tert-butyl ether [MTBE]	substances in tattoo inks and permanent make-up		R75	75
2-ethoxy-2-methylpropane	flammable / pyrophoric		R40	40
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylpentane]	flammable / pyrophoric		R40	40

Legend

R28-30 1. Shall not be placed on the market, or used,

- as substances,
- as constituents of other substances, or,
- in mixtures,

for supply to the general public when the individual concentration in the substance or mixture is equal to or greater than:

- either the relevant specific concentration limit specified in Part 3 of Annex VI to Regulation (EC) No 1272/2008, or,
- the relevant generic concentration limit specified in Part 3 of Annex I of Regulation (EC) No 1272/2008.

Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that the pack-

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

Legend

- aging of such substances and mixtures is marked visibly, legibly and indelibly as follows:
'Restricted to professional users'.
2. By way of derogation, paragraph 1 shall not apply to:
- (a) medicinal or veterinary products as defined by Directive 2001/82/EC and Directive 2001/83/EC;
 - (b) cosmetic products as defined by Directive 76/768/EEC;
 - (c) the following fuels and oil products:
 - motor fuels which are covered by Directive 98/70/EC,
 - mineral oil products intended for use as fuel in mobile or fixed combustion plants,
 - fuels sold in closed systems (e.g. liquid gas bottles);
 - (d) artists' paints covered by Regulation (EC) No 1272/2008;
 - (e) the substances listed in Appendix 11, column 1, for the applications or uses listed in Appendix 11, column 2. Where a date is specified in column 2 of Appendix 11, the derogation shall apply until the said date;
 - (f) devices covered by Regulation (EU) 2017/745.
- R3 1. Shall not be used in:
- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
 - tricks and jokes,
 - games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
2. Articles not complying with paragraph 1 shall not be placed on the market.
3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
- can be used as fuel in decorative oil lamps for supply to the general public, and
 - present an aspiration hazard and are labelled with H304.
4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
5. Without prejudice to the implementation of other Union provisions relating to the classification, labelling and packaging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
- (a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil – or even sucking the wick of lamps – may lead to life-threatening lung damage";
 - (b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter fluid may lead to life threatening lung damage';
 - (c) lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.;
- R40 1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:
- metallic glitter intended mainly for decoration,
 - artificial snow and frost,
 - 'whoopie' cushions,
 - silly string aerosols,
 - imitation excrement,
 - horns for parties,
 - decorative flakes and foams,
 - artificial cobwebs,
 - stink bombs.
2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with:
'For professional users only'.
3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/324/EEC (2).
4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

Legend

R75

1. Shall not be placed on the market in mixtures for use for tattooing purposes, and mixtures containing any such substances shall not be used for tattooing purposes, after 4 January 2022 if the substance or substances in question is or are present in the following circumstances:

(a) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight;

(b) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as reproductive toxicant category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;

(c) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin sensitiser category 1, 1A or 1B, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;

(d) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2, or as serious eye damage category 1 or eye irritant category 2, the substance is present in the mixture in a concentration equal to or greater than:

(i) 0,1 % by weight, if the substance is used solely as a pH regulator;

(ii) 0,01 % by weight, in all other cases;

(e) in the case of a substance listed in Annex II to Regulation (EC) No 1223/2009 (*1), the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight;

(f) in the case of a substance for which a condition of one or more of the following kinds is specified in column g (Product type, Body parts) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight:

(i) "Rinse-off products";

(ii) "Not to be used in products applied on mucous membranes";

(iii) "Not to be used in eye products";

(g) in the case of a substance for which a condition is specified in column h (Maximum concentration in ready for use preparation) or column i (Other) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration, or in some other way, that does not accord with the condition specified in that column;

(h) in the case of a substance listed in Appendix 13 to this Annex, the substance is present in the mixture in a concentration equal to or greater than the concentration limit specified for that substance in that Appendix.

2. For the purposes of this entry use of a mixture "for tattooing purposes" means injection or introduction of the mixture into a person's skin, mucous membrane or eyeball, by any process or procedure (including procedures commonly referred to as permanent make-up, cosmetic tattooing, micro-blading and micro-pigmentation), with the aim of making a mark or design on his or her body.

3. If a substance not listed in Appendix 13 falls within more than one of points (a) to (g) of paragraph 1, the strictest concentration limit laid down in the points in question shall apply to that substance. If a substance listed in Appendix 13 also falls within one or more of points (a) to (g) of paragraph 1, the concentration limit laid down in point (h) of paragraph 1 shall apply to that substance.

4. By way of derogation, paragraph 1 shall not apply to the following substances until 4 January 2023:

(a) Pigment Blue 15:3 (CI 74160, EC No 205-685-1, CAS No 147-14-8);

(b) Pigment Green 7 (CI 74260, EC No 215-524-7, CAS No 1328-53-6).

5. If Part 3 of Annex VI to Regulation (EC) No 1272/2008 is amended after 4 January 2021 to classify or re-classify a substance such that the substance then becomes caught by point (a), (b), (c) or (d) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the date of application of that new or revised classification is after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect on the date of application of that new or revised classification.

6. If Annex II or Annex IV to Regulation (EC) No 1223/2009 is amended after 4 January 2021 to list or change the listing of a substance such that the substance then becomes caught by point (e), (f) or (g) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the amendment takes effect after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect from the date falling 18 months after entry into force of the act by which that amendment was made.

7. Suppliers placing a mixture on the market for use for tattooing purposes shall ensure that, after 4 January 2022, the mixture is marked with the following information:

(a) the statement "Mixture for use in tattoos or permanent make-up";

(b) a reference number to uniquely identify the batch;

(c) the list of ingredients in accordance with the nomenclature established in the glossary of common ingredient names pursuant to Article 33 of Regulation (EC) No 1223/2009, or in the absence of a common ingredient name, the IUPAC name. In the absence of a common ingredient name or IUPAC name, the CAS and EC number. In-

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

Legend

Ingredients shall be listed in descending order by weight or volume of the ingredients at the time of formulation. "Ingredient" means any substance added during the process of formulation and present in the mixture for use for tattooing purposes. Impurities shall not be regarded as ingredients. If the name of a substance, used as ingredient within the meaning of this entry, is already required to be stated on the label in accordance with Regulation (EC) No 1272/2008, that ingredient does not need to be marked in accordance with this Regulation;

(d) the additional statement "pH regulator" for substances falling under point (d)(i) of paragraph 1;

(e) the statement "Contains nickel. Can cause allergic reactions." if the mixture contains nickel below the concentration limit specified in Appendix 13;

(f) the statement "Contains chromium (VI). Can cause allergic reactions." if the mixture contains chromium (VI) below the concentration limit specified in Appendix 13;

(g) safety instructions for use insofar as they are not already required to be stated on the label by Regulation (EC) No 1272/2008.

The information shall be clearly visible, easily legible and marked in a way that is indelible.

The information shall be written in the official language(s) of the Member State(s) where the mixture is placed on the market, unless the Member State(s) concerned provide(s) otherwise.

Where necessary because of the size of the package, the information listed in the first subparagraph, except for point (a), shall be included instead in the instructions for use.

Before using a mixture for tattooing purposes, the person using the mixture shall provide the person undergoing the procedure with the information marked on the package or included in the instructions for use pursuant to this paragraph.

8. Mixtures that do not contain the statement "Mixture for use in tattoos or permanent make-up" shall not be used for tattooing purposes.

9. This entry does not apply to substances that are gases at temperature of 20 °C and pressure of 101,3 kPa, or generate a vapour pressure of more than 300 kPa at temperature of 50 °C, with the exception of formaldehyde (CAS No 50-00-0, EC No 200-001-8).

10. This entry does not apply to the placing on the market of a mixture for use for tattooing purposes, or to the use of a mixture for tattooing purposes, when placed on the market exclusively as a medical device or an accessory to a medical device, within the meaning of Regulation (EU) 2017/745, or when used exclusively as a medical device or an accessory to a medical device, within the same meaning. Where the placing on the market or use may not be exclusively as a medical device or an accessory to a medical device, the requirements of Regulation (EU) 2017/745 and of this Regulation shall apply cumulatively.

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

None of the ingredients are listed.

Seveso Directive

2012/18/EU (Seveso III)			
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes
34a	petroleum product (gasolines and naphthas)	2.500 25.000	

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed.

Water Framework Directive (WFD)

List of pollutants (WFD)				
Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
Ethanol	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which		a)	

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1. 1) SDS02

List of pollutants (WFD)				
Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
	may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment			
Gasoline	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		a)	
Methyl tert-butyl ether [MTBE]	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		a)	
tert-Amyl methyl ether [TAME or 2-methoxy-2-methylpentane]	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		a)	

Legend

a) Indicative list of the main pollutants

Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors, amending Regulation (EC) No 1907/2006 and repealing Regulation (EU) No 98/2013

None of the ingredients are listed.

Regulation on persistent organic pollutants (POP)

None of the ingredients are listed.

National regulations (Netherlands)

SZW-lijst CMR effects

List of carcinogenic, mutagenic and reproductive toxic substances (SZW-lijst)				
Name acc. to inventory	CAS No	Carcinogenicity	Mutagenicity	Reproductive toxicity
ethanol (ethyl alcohol)	64-17-5	carc		repr F1A

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

List of carcinogenic, mutagenic and reproductive toxic substances (SZW-lijst)				
Name acc. to inventory	CAS No	Carcinogenicity	Mutagenicity	Reproductive toxicity
				D1A B
(complex) petroleum and coal derivatives (hydrocarbons)		carc		
petroleum gases and residues (hydrocarbons)			muta	

Legend

B	Breastfeeding category
carc	Listed in "B List of carcinogenic substances"
D1A	Development category 1A
F1A	Fertility category 1A
muta	Listed in "SZW list of mutagenic substances"
repr	Listed in "NIET-limitative list of reproductive toxic substances"

List of Substances of Very High Concern, Rijksinstituut voor Volksgezondheid en Milieu (RIVM)

List of Substances of Very High Concern (ZZS-lijst)					
Name acc. to inventory	CAS No	Dust class for air emissions	Remarks	Threshold mass flow	Emission limit value
Gasoline, Low boiling point naphtha - unspecified	86290-81-5		rem-114 rem-119		

Legend

rem-114	De meeste aardolie- en steenkool derivaten zijn niet als ZZS opgenomen in bijlage 12a van de Activiteitenregeling milieubeheer. Alleen als deze producten minder dan 0,1% aan ZZS componenten bevatten, kan stofklasse gO.2 worden aangehouden. Als er meer dan 0,1% ZZS componenten aanwezig zijn, moet het product als ZZS worden beschouwd. Bij de aanwezigheid van vluchtige ZZS-componenten adviseren we de stofklasse MVP 2 te hanteren; bij de aanwezigheid van niet-vluchtige ZZS-componenten adviseren we de stofklasse MVP 1 te hanteren. Voor meer gedetailleerde criteria voor stoffen en mengsels met een ZZS-component zie: rvs.rivm.nl/stoffenlijsten/Zeer-Zorgwekkende-Stoffen/ZZS-in-mengels . Advies voor vergunningverlening voor mengsels en stoffen met ZZS-bestanddelen wordt gegeven op de website van het IPLO: https://iplo.nl/thema/zeer-zorgwekkende-stoffen-zzs/mengsels-zzs/
rem-119	De stof hoeft volgens CLP niet als kankerverwekkend of mutageen te worden ingedeeld als kan worden aangetoond dat zij minder dan 0,1 % (g/g) benzeen (Einecs-nr. 200-753-7) bevat. Als de stof niet als kankerverwekkend wordt ingedeeld, gelden hiervoor minimaal de voorzorgsmaatregelen (P102-)P260-P262- P301 + P310-P331. De stof kan dan echter toch een ZZS zijn. Andere componenten erin kunnen bijvoorbeeld schadelijk zijn voor de voortplanting of PBT (Persistent, Bioaccumulerend én Toxisch) zijn. Om te concluderen dat de stof geen ZZS is moet duidelijk zijn dat het geen van deze componenten bevat.

15.2 Chemical safety assessment

For the substances of this mixture a chemical safety assessment has been carried out.

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2006/15/EC	Commission Directive establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC
2009/161/EU	Commission Directive establishing a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC
2022/431/EU	Directive (EU) 2022/431 of the European Parliament and of the Council of 9 March 2022 amending Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ADR/RID/ADN	Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
Asp. Tox.	Aspiration hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
Carc.	Carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EbC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1. 1) SDS02

Abbr.	Descriptions of used abbreviations
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
EL50	Effective Loading 50 %: the EL50 corresponds to the loading rate required to produce a response in 50% of the test organisms
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	Indicative occupational exposure limit value
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LEL	Lower explosion limit (LEL)
LL50	Lethal Loading 50 %: the LL50 corresponds to the loading rate causing 50 % lethality
LOEC	Lowest Observed Effect Concentration
log KOW	n-Octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
Muta.	Germ cell mutagenicity
NLP	No-Longer Polymer

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

Abbr.	Descriptions of used abbreviations
NOEC	No Observed Effect Concentration
NOELR	No Observed Effect Loading Rate
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
Repr.	Reproductive toxicity
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
SC-SZW	Staatscourant: Regeling van de Minister van Sociale Zaken en Werkgelegenheid tot wijziging van de Arbeidsomstandighedenregeling
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
SVHC	Substance of Very High Concern
TWA	Time-weighted average
UEL	Upper explosion limit (UEL)
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

GASOLINE

Version number: 2.0. Revision: 01.12.2023
Replaces version of 14.12.2021 (1.1) SDS02

Code	Text
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H350	May cause cancer.
H361d	Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

Use code	IUCID Use Name	Chemical Use Name	Life Cycle Stage	C&L status	EU Tonnage T/yr (Historic data)	PETORISK product lifecycle information	PETORISK LocalCSR	Exposure Scenario Human Health	Exposure Scenario Environment
M-1	01 - Manufacture of substance (classified; excluding H340, H350 and H361; (containing less than 0.1% benzene))	Manufacture of substance	Manufacture	Classified non-CMR	5,062,558	Manufacture of substance	Manufacture of substance	BH Manufacture 1	Env Manufacture
M-2	01 - Manufacture of substance (classified; including H340 and/or H350 and/or H361; (containing 0% to 1% benzene))	Manufacture of substance; Closed systems; Level I	Manufacture	Classified CMR	105,044,368	Manufacture of substance	Manufacture of substance	BH Manufacture 2	Env Manufacture
M-3	01 - Manufacture of substance (classified; including H340, H350 and/or H361; (containing equal to or greater than 1% to 5% benzene))	Manufacture of substance; Closed systems; Level II	Manufacture	Classified CMR	1,753,101	Manufacture of substance	Manufacture of substance	BH Manufacture 3	Env Manufacture
M-4	01 - Manufacture of substance (classified; including H340, H350 and/or H361; (containing equal to or greater than 5% to 20% benzene))	Manufacture of substance; Closed systems; Level III	Manufacture	Classified CMR	11,000	Manufacture of substance	Manufacture of substance	BH Manufacture 4	Env Manufacture
M-5	01 - Manufacture of substance (classified; including H340, H350 and/or H361; (containing equal to or greater than 20% to 79% benzene))	Manufacture of substance; Closed systems; Level IV	Manufacture	Classified CMR	2,000	Manufacture of substance	Manufacture of substance	BH Manufacture 5	Env Manufacture
F-16	02 - Formulation & (re)packing of substances and mixtures (classified; excluding H340, H350 and H361; (containing less than 0.1% benzene))	Formulation & (re)packing of substances and mixtures	Formulation	Classified non-CMR	5,062,977	Formulation & (re)packing of substances and mixtures	Formulation & (re)packing of substances and mixtures	BH Formulation 1	Env Formulation
F-17	02 - Formulation & (re)packing of substances and mixtures (classified; including H340 and/or H350 and/or H361; (containing 0% to 1% benzene))	Formulation & (re)packing of substances and mixtures; Closed systems; Level I	Formulation	Classified CMR	94,753,838	Formulation & (re)packing of substances and mixtures	Formulation & (re)packing of substances and mixtures	BH Formulation 2	Env Formulation
F-18	02 - Formulation & (re)packing of substances and mixtures (classified; including H340, H350 and/or H361; (containing equal to or greater than 1% to 5% benzene))	Formulation & (re)packing of substances and mixtures; Closed systems; Level II	Formulation	Classified CMR	140,000	Formulation & (re)packing of substances and mixtures	Formulation & (re)packing of substances and mixtures	BH Formulation 3	Env Formulation
F-19	02 - Formulation & (re)packing of substances and mixtures (classified; including H340, H350 and/or H361; (containing equal to or greater than 5% to 20% benzene))	Formulation & (re)packing of substances and mixtures; Closed systems; Level III	Formulation	Classified CMR	11,000	Formulation & (re)packing of substances and mixtures	Formulation & (re)packing of substances and mixtures	BH Formulation 4	Env Formulation
F-20	02 - Formulation & (re)packing of substances and mixtures (classified; including H340, H350 and/or H361; (containing equal to or greater than 20% to 79% benzene))	Formulation & (re)packing of substances and mixtures; Closed systems; Level IV	Formulation	Classified CMR	2,000	Formulation & (re)packing of substances and mixtures	Formulation & (re)packing of substances and mixtures	BH Formulation 5	Env Formulation
W-7	01b - Use of substance as intermediate (classified; including H340 and/or H350 and/or H361; (containing 0% to 1% benzene))	Use as an intermediate; Closed systems; Level I	Industrial	Classified CMR	4,915,320	Use as an intermediate	Use as an intermediate	BH Intermediate 2	Env Intermediate
W-8	01b - Use of substance as intermediate (classified; including H340, H350 and/or H361; (containing equal to or greater than 1% to 5% benzene))	Use as an intermediate; Closed systems; Level II	Industrial	Classified CMR	1,268,176	Use as an intermediate	Use as an intermediate	BH Intermediate 3	Env Intermediate
W-29	12a - Use in fuel; Industrial (classified; including H340 and/or H350 and/or H361; (containing 0% to 1% benzene))	Use in fuel; Industrial; Closed systems; Level I	Industrial	Classified CMR	9,865,112	Use in fuel; Industrial	Use in fuel; Industrial	BH Ind Fuel 2	Env Ind Fuel
W-501	12a - Use in fuel; Industrial (classified; including H340, H350 and/or H361; (containing equal to or greater than 1% to 5% benzene))	Use in fuel; Industrial; Closed systems; Level II	Industrial	Classified CMR	10,000	Use in fuel; Industrial	Use in fuel; Industrial	BH Ind Fuel 3	Env Ind Fuel
PW-30	12b - Use in fuel; Professional (classified; excluding H340, H350 and H361; (containing less than 0.1% benzene))	Use in fuel; Professional	Professional	Classified non-CMR	45,977	Use in fuel; Professional	Use in fuel; Professional	BH Pft Fuel 1	Env Pft Fuel
PW-31	12b - Use in fuel; Professional (classified; including H340 and/or H350 and/or H361; (containing 0% to 1% benzene))	Use in fuel; Professional; Closed systems	Professional	Classified CMR	9,011,253	Use in fuel; Professional	Use in fuel; Professional	BH Pft Fuel 2&3&4&5	Env Pft Fuel
PW-504	12b - Use in fuel; Professional (classified; including H340, H350 and/or H361; (containing equal to or greater than 1% to 5% benzene))	Use in fuel; Professional; Closed systems	Professional	Classified CMR	20,000	Use in fuel; Professional	Use in fuel; Professional	BH Pft Fuel 2&3&4&5	Env Pft Fuel
PW-505	12b - Use in fuel; Professional (classified; including H340, H350 and/or H361; (containing equal to or greater than 5% to 20% benzene))	Use in fuel; Professional; Closed systems	Professional	Classified CMR	1,000	Use in fuel; Professional	Use in fuel; Professional	BH Pft Fuel 2&3&4&5	Env Pft Fuel
PW-506	12b - Use in fuel; Professional (classified; including H340, H350 and/or H361; (containing equal to or greater than 20% to 79% benzene))	Use in fuel; Professional; Closed systems	Professional	Classified CMR	1,000	Use in fuel; Professional	Use in fuel; Professional	BH Pft Fuel 2&3&4&5	Env Pft Fuel
C-32	12c - Use in fuel; Consumer (classified; excluding H340, H350 and H361; (containing less than 0.1% benzene))	Use in fuel; Consumer	Consumer	Classified non-CMR	5,017,000	Use in fuel; Consumer	Use in fuel; Consumer	BH Cns Fuel 1&2&3&4&5	Env Cns Fuel
C-33	12c - Use in fuel; Consumer (classified; including H340 and/or H350 and/or H361; (containing 0% to 1% benzene))	Use in fuel; Consumer	Consumer	Classified CMR	75,877,472	Use in fuel; Consumer	Use in fuel; Consumer	BH Cns Fuel 1&2&3&4&5	Env Cns Fuel
C-507	12c - Use in fuel; Consumer (classified; including H340, H350 and/or H361; (containing equal to or greater than 1% to 5% benzene))	Use in fuel; Consumer	Consumer	Classified CMR	110,000	Use in fuel; Consumer	Use in fuel; Consumer	BH Cns Fuel 1&2&3&4&5	Env Cns Fuel
C-508	12c - Use in fuel; Consumer (classified; including H340, H350 and/or H361; (containing equal to or greater than 5% to 20% benzene))	Use in fuel; Consumer	Consumer	Classified CMR	10,000	Use in fuel; Consumer	Use in fuel; Consumer	BH Cns Fuel 1&2&3&4&5	Env Cns Fuel
C-509	12c - Use in fuel; Consumer (classified; including H340, H350 and/or H361; (containing equal to or greater than 20% to 79% benzene))	Use in fuel; Consumer	Consumer	Classified CMR	1,000	Use in fuel; Consumer	Use in fuel; Consumer	BH Cns Fuel 1&2&3&4&5	Env Cns Fuel

GOTO USES

Section 1	
Title	
01 - Manufacture of substance	
Use Descriptor	
Sector(s) of Use	
Process Categories	1, 2, 3, 4, 8a, 8b, 9, 15, 28
Environmental Release Categories	
Specific Environmental Release Category	
Processes, tasks, activities covered	
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.	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure	Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure [ESCom-11133171335]
Concentration of substance in product	Covers percentage substance in the product up to 100 %. (unless stated differently) [ESCom-11133171310 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200] Covers percentage benzene in the substance up to <0.1% [] Covers percentage n-hexane in the substance up to <3% [] Covers percentage toluene in the substance up to <3% []
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) [ESCom-11133171304 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Other Operational Conditions affecting exposure	Assumes a good basic standard of occupational hygiene is implemented [ESCom-11133171303] Covers use at ambient temperatures. (unless stated differently) [ESCom-10133224959 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Contributing Scenarios	
General measures (skin irritants) [ESCom-10133224705]	Specific Risk Management Measures and Operating Conditions Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS. [ESCom-10133224705 ESCom-11133170587 ESCom-15193135704 ESCom-10133224896 ESCom-9267230103 ESCom-15193135705 ESCom-12355002165]
General measures (flammability) [ESCom-19350151900]	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8. [ESCom-19350151900 ESCom-16354135500]
General measures (aspiration hazard)	Do not ingest. If swallowed then seek immediate medical assistance. [ESCom-19350151700 ESCom-9313214709 ESCom-15193135612]
General exposures; Closed systems (PROC_3, PROC_2, PROC_1)	Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361] Assumes process temperature up to 800.0 °C [ESCom-12355002161]
General exposures; Open systems (PROC_4)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412]
Process sampling (PROC_9)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412]
Laboratory activities (PROC_15)	No other specific measures identified. [ESCom-11133171454] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. Put lids on containers immediately after use. [ESCom-92672303011]
Bulk transfers; Closed systems (PROC_8b)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422]
Bulk transfers; Open systems (PROC_8b)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. Ensure no splashing occurs during transfer. [ESCom-16173221409]
Equipment cleaning and maintenance (PROC_8a, PROC_28)	Drain down and flush system prior to equipment break-in or maintenance. [ESCom-11133171413] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. Wear suitable coveralls to prevent exposure to the skin. [ESCom-11133171468] Clear spills immediately. [ESCom-9267230103]
Storage (PROC_2, PROC_1)	Store substance within a closed system. [ESCom-11133171437]
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	
Section 4 Guidance to check compliance with the Exposure Scenario	
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.; Available hazard data do not enable the derivation of a DNEL for aspiration effects.; Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.; Risk management measures are based on qualitative risk characterisation. [ESCom-11133171315; ESCom-10133224709; ESCom-16354132600; ESCom-11133171317; ESCom-11133171322]	

GOTO USES

Section 1	
Title	
01 - Manufacture of substance; Closed systems; Level I	
Use Descriptor	
Sector(s) of Use	
Process Categories	1, 2, 3, 8a, 8b, 15, 28
Environmental Release Categories	
Specific Environmental Release Category	
Processes, tasks, activities covered	
Manufacture of the substance or use as a process chemical or extraction agent within closed or contained systems. Includes incidental exposures during recycling/recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure	Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure [ESCom-11133171335]
Concentration of substance in product	Covers percentage substance in the product up to 100 %. (unless stated differently) [ESCom-11133171310 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200] Covers percentage benzene in the substance up to <1% I]
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) [ESCom-11133171304 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Other Operational Conditions affecting exposure	Assumes a good basic standard of occupational hygiene is implemented [ESCom-11133171303] Covers use at ambient temperatures. (unless stated differently) [ESCom-10133224959 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Contributing Scenarios	
Specific Risk Management Measures and Operating Conditions	
General measures (skin irritants) [ESCom-10133224705]	Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS. [ESCom-10133224705 ESCom-11133170587 ESCom-15193135704 ESCom-10133224896 ESCom-9267230103 ESCom-15193135705 ESCom-12355002165]
General measures (carcinogens) [ESCom-10133224704]	Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance. Access to work area only for authorised persons. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Wear suitable coveralls to prevent exposure to the skin. Wear respiratory protection when its use is identified for certain contributing scenarios. For further specification, refer to section 8 of the SDS. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance. [ESCom-10133224704 ESCom-15193135706 ESCom-15193135707 ESCom-11133171413 ESCom-16354140200 ESCom-11133171457 ESCom-11133171468 ESCom-15193135708 ESCom-12355002165 ESCom-9267230103 ESCom-11133170664 ESCom-15193135709 ESCom-11133171359 ESCom-15193135710]
General measures (flammability) [ESCom-19350151900]	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8. [ESCom-19350151900 ESCom-16354135500]
General measures (aspiration hazard)	Do not ingest. If swallowed then seek immediate medical assistance. [ESCom-19350151700 ESCom-9313214709 ESCom-15193135612]
General exposures; Closed systems (PROC_2, PROC_1)	Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361] Assumes process temperature up to 800.0 °C [ESCom-12355002161]
General exposures; Batch process; Closed systems (PROC_3)	Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361] Assumes process temperature up to 800.0 °C [ESCom-12355002161]
Laboratory activities (PROC_15)	Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure. [ESCom-10133224826] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Put lids on containers immediately after use. [ESCom-9267230301]</i>
Bulk transfers; Closed systems; Loading and unloading (PROC_8b)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422]
Equipment cleaning and maintenance (PROC_8a, PROC_28)	Drain down and flush system prior to equipment break-in or maintenance. [ESCom-11133171413] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Wear suitable coveralls to prevent exposure to the skin. [ESCom-11133171468] Clear spills immediately. [ESCom-9267230103]</i>
Storage (PROC_2, PROC_1)	Store substance within a closed system. [ESCom-11133171437]
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	
Section 4 Guidance to check compliance with the Exposure Scenario	
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.; Available hazard data do not enable the derivation of a DNEL for carcinogenic effects.; Available hazard data do not enable the derivation of a DNEL for aspiration effects.; Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.; Risk management measures are based on qualitative risk characterisation. [ESCom-11133171315; ESCom-10133224709; ESCom-11133171318; ESCom-16354132600; ESCom-11133171317; ESCom-11133171322]	

GOTO USES

Section 1	
Title	
01 - Manufacture of substance; Closed systems; Level II	
Use Descriptor	
Sector(s) of Use	
Process Categories	1, 2, 3, 8a, 8b, 15, 28
Environmental Release Categories	
Specific Environmental Release Category	
Processes, tasks, activities covered	
Manufacture of the substance or use as a process chemical or extraction agent within closed or contained systems. Includes incidental exposures during recycling/recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure	Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure [ESCom-11133171335]
Concentration of substance in product	Covers percentage substance in the product up to 100 %. (unless stated differently) [ESCom-11133171310 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200] Covers percentage benzene in the substance up to <5% II
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) [ESCom-11133171304 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Other Operational Conditions affecting exposure	Assumes a good basic standard of occupational hygiene is implemented [ESCom-11133171303] Covers use at ambient temperatures. (unless stated differently) [ESCom-10133224959 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Contributing Scenarios	
Specific Risk Management Measures and Operating Conditions	
General measures (skin irritants) [ESCom-10133224705]	Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS. [ESCom-10133224705 ESCom-11133170587 ESCom-15193135704 ESCom-10133224896 ESCom-9267230103 ESCom-15193135705 ESCom-12355002165]
General measures (carcinogens) [ESCom-10133224704]	Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance. Access to work area only for authorised persons. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Wear suitable coveralls to prevent exposure to the skin. Wear respiratory protection when its use is identified for certain contributing scenarios. For further specification, refer to section 8 of the SDS. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance. [ESCom-10133224704 ESCom-15193135706 ESCom-15193135707 ESCom-11133171413 ESCom-16354140200 ESCom-11133171457 ESCom-11133171468 ESCom-15193135708 ESCom-12355002165 ESCom-9267230103 ESCom-11133170664 ESCom-15193135709 ESCom-11133171359 ESCom-15193135710]
General measures (flammability) [ESCom-19350151900]	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8. [ESCom-19350151900 ESCom-16354135500]
General measures (aspiration hazard)	Do not ingest. If swallowed then seek immediate medical assistance. [ESCom-19350151700 ESCom-9313214709 ESCom-15193135612]
General exposures; Closed systems (PROC_1)	Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361] Assumes process temperature up to 800.0 °C [ESCom-12355002161]
General exposures; Closed systems (PROC_2)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361] Assumes process temperature up to 800.0 °C [ESCom-12355002161]
General exposures; Batch process; Closed systems (PROC_3)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361] Assumes process temperature up to 800.0 °C [ESCom-12355002161]
Laboratory activities (PROC_15)	Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure. [ESCom-10133224826] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Put lids on containers immediately after use. [ESCom-9267230301]</i>
Bulk transfers; Closed systems; Loading and unloading (PROC_8b)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422]
Equipment cleaning and maintenance (PROC_8a, PROC_28)	Covers use up to 4.0 h/day [ESCom-11133171521] Drain down and flush system prior to equipment break-in or maintenance. [ESCom-11133171413] Wear a respirator conforming to EN140. [ESCom-15193135617] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Wear suitable coveralls to prevent exposure to the skin. [ESCom-11133171468] Clear spills immediately. [ESCom-9267230103]</i>
Storage (PROC_1)	Store substance within a closed system. [ESCom-11133171437]
Storage (PROC_2)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Store substance within a closed system. [ESCom-11133171437]
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	
Section 4 Guidance to check compliance with the Exposure Scenario	

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.; Available hazard data do not enable the derivation of a DNEL for carcinogenic effects.; Available hazard data do not enable the derivation of a DNEL for aspiration effects.; Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.; Risk management measures are based on qualitative risk characterisation. [ESCom-11133171315; ESCom-10133224709; ESCom-11133171318; ESCom-16354132600; ESCom-11133171317; ESCom-11133171322]

GOTO USES

Section 1	
Title	
01 - Manufacture of substance; Closed systems; Level III	
Use Descriptor	
Sector(s) of Use	
Process Categories	1, 2, 3, 8a, 8b, 15, 28
Environmental Release Categories	
Specific Environmental Release Category	
Processes, tasks, activities covered	
Manufacture of the substance or use as a process chemical or extraction agent within closed or contained systems. Includes incidental exposures during recycling/recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure	Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure [ESCom-11133171335]
Concentration of substance in product	Covers percentage substance in the product up to 100 %. (unless stated differently) [ESCom-11133171310 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200] Covers percentage benzene in the substance up to <20% [I]
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) [ESCom-11133171304 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Other Operational Conditions affecting exposure	Assumes a good basic standard of occupational hygiene is implemented [ESCom-11133171303] Covers use at ambient temperatures. (unless stated differently) [ESCom-10133224959 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Contributing Scenarios	
Specific Risk Management Measures and Operating Conditions	
General measures (skin irritants) [ESCom-10133224705]	Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS. [ESCom-10133224705 ESCom-11133170587 ESCom-15193135704 ESCom-10133224896 ESCom-9267230103 ESCom-15193135705 ESCom-12355002165]
General measures (carcinogens) [ESCom-10133224704]	Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance. Access to work area only for authorised persons. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Wear suitable coveralls to prevent exposure to the skin. Wear respiratory protection when its use is identified for certain contributing scenarios. For further specification, refer to section 8 of the SDS. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance. [ESCom-10133224704 ESCom-15193135706 ESCom-15193135707 ESCom-11133171413 ESCom-16354140200 ESCom-11133171457 ESCom-11133171468 ESCom-15193135708 ESCom-12355002165 ESCom-9267230103 ESCom-11133170664 ESCom-15193135709 ESCom-11133171359 ESCom-15193135710]
General measures (flammability) [ESCom-19350151900]	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8. [ESCom-19350151900 ESCom-16354135500]
General measures (aspiration hazard)	Do not ingest. If swallowed then seek immediate medical assistance. [ESCom-19350151700 ESCom-9313214709 ESCom-15193135612]
General measures (eye irritants) [ESCom-11133171329]	Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands. [ESCom-11133171329 ESCom-11133171467 ESCom-11133171429]
General exposures; Closed systems (PROC_1)	Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361] Assumes process temperature up to 800.0 °C [ESCom-12355002161]
General exposures; Closed systems (PROC_2)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361] Assumes process temperature up to 800.0 °C [ESCom-12355002161]
General exposures; Batch process; Closed systems (PROC_3)	Covers use up to 4.0 h/day [ESCom-11133171521] Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361] Ensure operation is undertaken outdoors. [ESCom-11133171425] Assumes process temperature up to 800.0 °C [ESCom-12355002161]
Laboratory activities (PROC_15)	Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure. [ESCom-10133224826] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Put lids on containers immediately after use. [ESCom-9267230301]</i>
Bulk transfers; Closed systems; Loading and unloading (PROC_8b)	Covers use up to 4.0 h/day [ESCom-11133171521] Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422] Wear a respirator conforming to EN140. [ESCom-15193135617]
Equipment cleaning and maintenance (PROC_8a, PROC_28)	Covers use up to 4.0 h/day [ESCom-11133171521] Drain down and flush system prior to equipment break-in or maintenance. [ESCom-11133171413] Wear a respirator conforming to EN140. [ESCom-15193135617] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Wear suitable coveralls to prevent exposure to the skin. [ESCom-11133171468] Clear spills immediately. [ESCom-9267230103]</i>
Storage (PROC_1)	Store substance within a closed system. [ESCom-11133171437]
Storage (PROC_2)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Store substance within a closed system. [ESCom-11133171437]

Section 3 Exposure Estimation**3.1. Health**

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

Section 4 Guidance to check compliance with the Exposure Scenario**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.; Available hazard data do not enable the derivation of a DNEL for carcinogenic effects.; Available hazard data do not enable the derivation of a DNEL for aspiration effects.; Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.; Available hazard data do not enable the derivation of a DNEL for eye irritant effects.; Risk management measures are based on qualitative risk characterisation. [ESCom-11133171315; ESCom-10133224709; ESCom-11133171318; ESCom-16354132600; ESCom-11133171317; ESCom-11133171330; ESCom-11133171322]

GOTO USES

Section 1	
Title	
01 - Manufacture of substance; Closed systems; Level IV	
Use Descriptor	
Sector(s) of Use	
Process Categories	1, 2, 3, 8a, 8b, 15, 28
Environmental Release Categories	
Specific Environmental Release Category	
Processes, tasks, activities covered	
Manufacture of the substance or use as a process chemical or extraction agent within closed or contained systems. Includes incidental exposures during recycling/recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure	Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure [ESCom-11133171335]
Concentration of substance in product	Covers percentage substance in the product up to 100 %. (unless stated differently) [ESCom-11133171310 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) [ESCom-11133171304 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Other Operational Conditions affecting exposure	Assumes a good basic standard of occupational hygiene is implemented [ESCom-11133171303] Covers use at ambient temperatures. (unless stated differently) [ESCom-10133224959 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Contributing Scenarios	
Specific Risk Management Measures and Operating Conditions	
General measures (skin irritants) [ESCom-10133224705]	Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS. [ESCom-10133224705 ESCom-11133170587 ESCom-15193135704 ESCom-10133224896 ESCom-9267230103 ESCom-15193135705 ESCom-12355002165]
General measures (carcinogens) [ESCom-10133224704]	Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance. Access to work area only for authorised persons. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Wear suitable coveralls to prevent exposure to the skin. Wear respiratory protection when its use is identified for certain contributing scenarios. For further specification, refer to section 8 of the SDS. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance. [ESCom-10133224704 ESCom-15193135706 ESCom-15193135707 ESCom-11133171413 ESCom-16354140200 ESCom-11133171457 ESCom-11133171468 ESCom-15193135708 ESCom-12355002165 ESCom-9267230103 ESCom-11133170664 ESCom-15193135709 ESCom-11133171359 ESCom-15193135710]
General measures (flammability) [ESCom-19350151900]	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8. [ESCom-19350151900 ESCom-16354135500]
General measures (aspiration hazard)	Do not ingest. If swallowed then seek immediate medical assistance. [ESCom-19350151700 ESCom-9313214709 ESCom-15193135612]
General measures (eye irritants) [ESCom-11133171329]	Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands. [ESCom-11133171329 ESCom-11133171467 ESCom-11133171429]
General exposures; Closed systems (PROC_1)	Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361] Assumes process temperature up to 800.0 °C [ESCom-12355002161]
General exposures; Closed systems (PROC_2)	Covers use up to 1.0 h/day [ESCom-11133171521] Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361] Assumes process temperature up to 800.0 °C [ESCom-12355002161]
General exposures; Batch process; Closed systems (PROC_3)	Covers use up to 1.0 h/day [ESCom-11133171521] Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361] Ensure operation is undertaken outdoors. [ESCom-11133171425] Assumes process temperature up to 800.0 °C [ESCom-12355002161]
Laboratory activities (PROC_15)	Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure. [ESCom-10133224826] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. Put lids on containers immediately after use. [ESCom-9267230301]
Bulk transfers; Closed systems; Loading and unloading (PROC_8b)	Covers use up to 4.0 h/day [ESCom-11133171521] Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422] Wear a respirator conforming to EN140. [ESCom-15193135617]
Equipment cleaning and maintenance (PROC_8a, PROC_28)	Covers use up to 4.0 h/day [ESCom-11133171521] Provide a good standard of controlled ventilation (5 to 10 air changes per hour). [ESCom-12355002164] Drain down and flush system prior to equipment break-in or maintenance. [ESCom-11133171413] Wear a respirator conforming to EN140. [ESCom-15193135617] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. Wear suitable coveralls to prevent exposure to the skin. [ESCom-11133171468] Clear spills immediately. [ESCom-9267230103]
Storage (PROC_1)	Store substance within a closed system. [ESCom-11133171437]

Storage (PROC_2)	Covers use up to 1.0 h/day [ESCom-11133171521] Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Store substance within a closed system. [ESCom-11133171437]
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	
Section 4 Guidance to check compliance with the Exposure Scenario	
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.; Available hazard data do not enable the derivation of a DNEL for carcinogenic effects.; Available hazard data do not enable the derivation of a DNEL for aspiration effects.; Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.; Available hazard data do not enable the derivation of a DNEL for eye irritant effects.; Risk management measures are based on qualitative risk characterisation. [ESCom-11133171315; ESCom-10133224709; ESCom-11133171318; ESCom-16354132600; ESCom-11133171317; ESCom-11133171330; ESCom-11133171322]	

GOTO USES

Section 1	
Title	
02 - Formulation & (re)packing of substances and mixtures	
Use Descriptor	
Sector(s) of Use	
Process Categories	1, 2, 3, 4, 5, 8a, 8b, 9, 14, 15, 28
Environmental Release Categories	
Specific Environmental Release Category	
Processes, tasks, activities covered	
Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tableting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure	Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure [ESCom-11133171335]
Concentration of substance in product	Covers percentage substance in the product up to 100 %. (unless stated differently) [ESCom-11133171310 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200] Covers percentage benzene in the substance up to <0.1% [] Covers percentage n-hexane in the substance up to <3% [] Covers percentage toluene in the substance up to <3% []
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) [ESCom-11133171304 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Other Operational Conditions affecting exposure	Assumes a good basic standard of occupational hygiene is implemented [ESCom-11133171303] Covers use at ambient temperatures. (unless stated differently) [ESCom-10133224959 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Contributing Scenarios	
General measures (skin irritants) [ESCom-10133224705]	Specific Risk Management Measures and Operating Conditions Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS. [ESCom-10133224705 ESCom-11133170587 ESCom-15193135704 ESCom-10133224896 ESCom-9267230103 ESCom-15193135705 ESCom-12355002165]
General measures (flammability) [ESCom-19350151900]	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8. [ESCom-19350151900 ESCom-16354135500]
General measures (aspiration hazard)	Do not ingest. If swallowed then seek immediate medical assistance. [ESCom-19350151700 ESCom-9313214709 ESCom-15193135612]
General exposures; Closed systems (PROC 2, PROC 1, PROC 3)	Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
General exposures; Open systems (PROC 4)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412]
Batch process; Elevated temperature; Use in contained systems (PROC 3)	Handle substance within a closed system. [ESCom-11133171405] Assumes process temperature up to 60.0 °C [ESCom-12355002161]
Process sampling (PROC 9)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412]
Laboratory activities (PROC 15)	No other specific measures identified. [ESCom-11133171454] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Put lids on containers immediately after use. [ESCom-9267230301]</i>
Bulk transfers; Dedicated facility (PROC 8b)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Ensure no splashing occurs during transfer. [ESCom-16173221409]</i>
Mixing operations; Open systems (PROC 5)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412]
Manual; Transfer from/pouring from containers; Non-dedicated facility (PROC 8a)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422]
Drum/batch transfers; Dedicated facility (PROC 8b)	Use drum pumps. [ESCom-11133171411] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Ensure no splashing occurs during transfer. [ESCom-16173221409]</i>
Tableting, compression, extrusion or pelletisation (PROC 14)	Handle substance within a predominantly closed system provided with extract ventilation. [ESCom-11133171407]
Drum and small package filling (PROC 9)	Fill containers/cans at dedicated fill points supplied with local extract ventilation. [ESCom-11133171409]
Equipment cleaning and maintenance (PROC 8a, PROC 28)	Drain down and flush system prior to equipment break-in or maintenance. [ESCom-11133171413] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Wear suitable coveralls to prevent exposure to the skin. [ESCom-11133171468]</i> <i>Clear spills immediately. [ESCom-9267230103]</i>
Storage (PROC 2, PROC 1)	Store substance within a closed system. [ESCom-11133171437]
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	
Section 4 Guidance to check compliance with the Exposure Scenario	
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.; Available hazard data do not enable the derivation of a DNEL for aspiration effects.; Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.; Risk management measures are based on qualitative risk characterisation. [ESCom-11133171315; ESCom-10133224709; ESCom-16354132600; ESCom-11133171317; ESCom-11133171322]	

GOTO USES

Section 1	
Title	
02 - Formulation & (re)packing of substances and mixtures; Closed systems; Level I	
Use Descriptor	
Sector(s) of Use	
Process Categories	1, 2, 3, 8a, 8b, 15, 28
Environmental Release Categories	
Specific Environmental Release Category	
Processes, tasks, activities covered	
Formulation of the substance and its mixtures in batch or continuous operations within closed or contained systems, including incidental exposures during storage, materials transfers, mixing, maintenance, sampling and associated laboratory activities.	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure	Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure [ESCom-11133171335]
Concentration of substance in product	Covers percentage substance in the product up to 100 %. (unless stated differently) [ESCom-11133171310 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200] Covers percentage benzene in the substance up to <1% I]
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) [ESCom-11133171304 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Other Operational Conditions affecting exposure	Assumes a good basic standard of occupational hygiene is implemented [ESCom-11133171303] Covers use at ambient temperatures. (unless stated differently) [ESCom-10133224959 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Contributing Scenarios	
Specific Risk Management Measures and Operating Conditions	
General measures (skin irritants) [ESCom-10133224705]	Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS. [ESCom-10133224705 ESCom-11133170587 ESCom-15193135704 ESCom-10133224896 ESCom-9267230103 ESCom-15193135705 ESCom-12355002165]
General measures (carcinogens) [ESCom-10133224704]	Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance. Access to work area only for authorised persons. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Wear suitable coveralls to prevent exposure to the skin. Wear respiratory protection when its use is identified for certain contributing scenarios. For further specification, refer to section 8 of the SDS. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance. [ESCom-10133224704 ESCom-15193135706 ESCom-15193135707 ESCom-11133171413 ESCom-16354140200 ESCom-11133171457 ESCom-11133171468 ESCom-15193135708 ESCom-12355002165 ESCom-9267230103 ESCom-11133170664 ESCom-15193135709 ESCom-11133171359 ESCom-15193135710]
General measures (flammability) [ESCom-19350151900]	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8. [ESCom-19350151900 ESCom-16354135500]
General measures (aspiration hazard)	Do not ingest. If swallowed then seek immediate medical assistance. [ESCom-19350151700 ESCom-9313214709 ESCom-15193135612]
General exposures; Closed systems (PROC_2, PROC_1)	Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
General exposures; Batch process; Closed systems (PROC_3)	Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
Laboratory activities (PROC_15)	Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure. [ESCom-10133224826] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Put lids on containers immediately after use. IESCom-92672303011</i>
Bulk transfers; Drum/batch transfers; Closed systems (PROC_8b)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422]
Equipment cleaning and maintenance (PROC_8a, PROC_28)	Drain down and flush system prior to equipment break-in or maintenance. [ESCom-11133171413] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Wear suitable coveralls to prevent exposure to the skin. [ESCom-11133171468] Clear spills immediately. IESCom-92672301031</i>
Storage (PROC_2, PROC_1)	Store substance within a closed system. [ESCom-11133171437]
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	
Section 4 Guidance to check compliance with the Exposure Scenario	
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.; Available hazard data do not enable the derivation of a DNEL for carcinogenic effects.; Available hazard data do not enable the derivation of a DNEL for aspiration effects.; Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.; Risk management measures are based on qualitative risk characterisation. [ESCom-11133171315; ESCom-10133224709; ESCom-11133171318; ESCom-16354132600; ESCom-11133171317; ESCom-11133171322]	

GOTO USES

Section 1	
Title	
02 - Formulation & (re)packing of substances and mixtures; Closed systems; Level II	
Use Descriptor	
Sector(s) of Use	
Process Categories	1, 2, 3, 8a, 8b, 15, 28
Environmental Release Categories	
Specific Environmental Release Category	
Processes, tasks, activities covered	
Formulation of the substance and its mixtures in batch or continuous operations within closed or contained systems, including incidental exposures during storage, materials transfers, mixing, maintenance, sampling and associated laboratory activities.	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure	Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure [ESCom-11133171335]
Concentration of substance in product	Covers percentage substance in the product up to 100 %. (unless stated differently) [ESCom-11133171310 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200] Covers percentage benzene in the substance up to <5% []
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) [ESCom-11133171304 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Other Operational Conditions affecting exposure	Assumes a good basic standard of occupational hygiene is implemented [ESCom-11133171303] Covers use at ambient temperatures. (unless stated differently) [ESCom-10133224959 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Contributing Scenarios	
Specific Risk Management Measures and Operating Conditions	
General measures (skin irritants) [ESCom-10133224705]	Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS. [ESCom-10133224705 ESCom-11133170587 ESCom-15193135704 ESCom-10133224896 ESCom-9267230103 ESCom-15193135705 ESCom-12355002165]
General measures (carcinogens) [ESCom-10133224704]	Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance. Access to work area only for authorised persons. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Wear suitable coveralls to prevent exposure to the skin. Wear respiratory protection when its use is identified for certain contributing scenarios. For further specification, refer to section 8 of the SDS. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance. [ESCom-10133224704 ESCom-15193135706 ESCom-15193135707 ESCom-11133171413 ESCom-16354140200 ESCom-11133171457 ESCom-11133171468 ESCom-15193135708 ESCom-12355002165 ESCom-9267230103 ESCom-11133170664 ESCom-15193135709 ESCom-11133171359 ESCom-15193135710]
General measures (flammability) [ESCom-19350151900]	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8. [ESCom-19350151900 ESCom-16354135500]
General measures (aspiration hazard)	Do not ingest. If swallowed then seek immediate medical assistance. [ESCom-19350151700 ESCom-9313214709 ESCom-15193135612]
General exposures; Closed systems (PROC_1)	Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
General exposures; Closed systems (PROC_2)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
General exposures; Batch process; Closed systems (PROC_3)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
Laboratory activities (PROC_15)	Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure. [ESCom-10133224826] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Put lids on containers immediately after use. [ESCom-9267230301]</i>
Bulk transfers; Closed systems; Loading and unloading (PROC_8b)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422]
Equipment cleaning and maintenance (PROC_8a, PROC_28)	Covers use up to 4.0 h/day [ESCom-11133171521] Drain down and flush system prior to equipment break-in or maintenance. [ESCom-11133171413] Wear a respirator conforming to EN140. [ESCom-15193135617] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Wear suitable coveralls to prevent exposure to the skin. [ESCom-11133171468] Clear spills immediately. [ESCom-9267230103]</i>
Storage (PROC_1)	Store substance within a closed system. [ESCom-11133171437]
Storage (PROC_2)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Store substance within a closed system. [ESCom-11133171437]
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	
Section 4 Guidance to check compliance with the Exposure Scenario	
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.; Available hazard data do not enable the derivation of a DNEL for carcinogenic effects.; Available hazard data do not enable the derivation of a DNEL for aspiration effects.; Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.; Risk management measures are based on qualitative risk characterisation. [ESCom-11133171315; ESCom-10133224709; ESCom-11133171318; ESCom-16354132600; ESCom-11133171317; ESCom-11133171322]

GOTO USES

Section 1	
Title	
02 - Formulation & (re)packing of substances and mixtures; Closed systems; Level III	
Use Descriptor	
Sector(s) of Use	
Process Categories	1, 2, 3, 8a, 8b, 15, 28
Environmental Release Categories	
Specific Environmental Release Category	
Processes, tasks, activities covered	
Formulation of the substance and its mixtures in batch or continuous operations within closed or contained systems, including incidental exposures during storage, materials transfers, mixing, maintenance, sampling and associated laboratory activities.	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure	Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure [ESCom-11133171335]
Concentration of substance in product	Covers percentage substance in the product up to 100 %. (unless stated differently) [ESCom-11133171310 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200] Covers percentage benzene in the substance up to <20% [I]
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) [ESCom-11133171304 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Other Operational Conditions affecting exposure	Assumes a good basic standard of occupational hygiene is implemented [ESCom-11133171303] Covers use at ambient temperatures. (unless stated differently) [ESCom-10133224959 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Contributing Scenarios	
Specific Risk Management Measures and Operating Conditions	
General measures (skin irritants) [ESCom-10133224705]	Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS. [ESCom-10133224705 ESCom-11133170587 ESCom-15193135704 ESCom-10133224896 ESCom-9267230103 ESCom-15193135705 ESCom-12355002165]
General measures (carcinogens) [ESCom-10133224704]	Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance. Access to work area only for authorised persons. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Wear suitable coveralls to prevent exposure to the skin. Wear respiratory protection when its use is identified for certain contributing scenarios. For further specification, refer to section 8 of the SDS. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance. [ESCom-10133224704 ESCom-15193135706 ESCom-15193135707 ESCom-11133171413 ESCom-16354140200 ESCom-11133171457 ESCom-11133171468 ESCom-15193135708 ESCom-12355002165 ESCom-9267230103 ESCom-11133170664 ESCom-15193135709 ESCom-11133171359 ESCom-15193135710]
General measures (flammability) [ESCom-19350151900]	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8. [ESCom-19350151900 ESCom-16354135500]
General measures (aspiration hazard)	Do not ingest. If swallowed then seek immediate medical assistance. [ESCom-19350151700 ESCom-9313214709 ESCom-15193135612]
General measures (eye irritants) [ESCom-11133171329]	Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands. [ESCom-11133171329 ESCom-11133171467 ESCom-11133171429]
General exposures; Closed systems (PROC_1)	Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
General exposures; Closed systems (PROC_2)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
General exposures; Batch process; Closed systems (PROC_3)	Covers use up to 4.0 h/day [ESCom-11133171521] Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361] Ensure operation is undertaken outdoors. [ESCom-11133171425]
Laboratory activities (PROC_15)	Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure. [ESCom-10133224826] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Put lids on containers immediately after use. [ESCom-9267230301]</i>
Bulk transfers; Closed systems; Loading and unloading (PROC_8b)	Covers use up to 4.0 h/day [ESCom-11133171521] Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422] Wear a respirator conforming to EN140. [ESCom-15193135617]
Equipment cleaning and maintenance (PROC_8a, PROC_28)	Covers use up to 4.0 h/day [ESCom-11133171521] Drain down and flush system prior to equipment break-in or maintenance. [ESCom-11133171413] Wear a respirator conforming to EN140. [ESCom-15193135617] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Wear suitable coveralls to prevent exposure to the skin. [ESCom-11133171468] Clear spills immediately. [ESCom-9267230103]</i>
Storage (PROC_1)	Store substance within a closed system. [ESCom-11133171437]
Storage (PROC_2)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Store substance within a closed system. [ESCom-11133171437]
Section 3 Exposure Estimation	
3.1. Health	

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

Section 4 Guidance to check compliance with the Exposure Scenario

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.; Available hazard data do not enable the derivation of a DNEL for carcinogenic effects.; Available hazard data do not enable the derivation of a DNEL for aspiration effects.; Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.; Available hazard data do not enable the derivation of a DNEL for eye irritant effects.; Risk management measures are based on qualitative risk characterisation. [ESCom-11133171315; ESCom-10133224709; ESCom-11133171318; ESCom-16354132600; ESCom-11133171317; ESCom-11133171330; ESCom-11133171322]

GOTO USES

Section 1	
Title	
02 - Formulation & (re)packing of substances and mixtures; Closed systems; Level IV	
Use Descriptor	
Sector(s) of Use	
Process Categories	1, 2, 3, 8a, 8b, 15, 28
Environmental Release Categories	
Specific Environmental Release Category	
Processes, tasks, activities covered	
Formulation of the substance and its mixtures in batch or continuous operations within closed or contained systems, including incidental exposures during storage, materials transfers, mixing, maintenance, sampling and associated laboratory activities.	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure	Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure [ESCom-11133171335]
Concentration of substance in product	Covers percentage substance in the product up to 100 %. (unless stated differently) [ESCom-11133171310 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) [ESCom-11133171304 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Other Operational Conditions affecting exposure	Assumes a good basic standard of occupational hygiene is implemented [ESCom-11133171303] Covers use at ambient temperatures. (unless stated differently) [ESCom-10133224959 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Contributing Scenarios	
Specific Risk Management Measures and Operating Conditions	
General measures (skin irritants) [ESCom-10133224705]	Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS. [ESCom-10133224705 ESCom-11133170587 ESCom-15193135704 ESCom-10133224896 ESCom-9267230103 ESCom-15193135705 ESCom-12355002165]
General measures (carcinogens) [ESCom-10133224704]	Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance. Access to work area only for authorised persons. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Wear suitable coveralls to prevent exposure to the skin. Wear respiratory protection when its use is identified for certain contributing scenarios. For further specification, refer to section 8 of the SDS. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance. [ESCom-10133224704 ESCom-15193135706 ESCom-15193135707 ESCom-11133171413 ESCom-16354140200 ESCom-11133171457 ESCom-11133171468 ESCom-15193135708 ESCom-12355002165 ESCom-9267230103 ESCom-11133170664 ESCom-15193135709 ESCom-11133171359 ESCom-15193135710]
General measures (flammability) [ESCom-19350151900]	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8. [ESCom-19350151900 ESCom-16354135500]
General measures (aspiration hazard)	Do not ingest. If swallowed then seek immediate medical assistance. [ESCom-19350151700 ESCom-9313214709 ESCom-15193135612]
General measures (eye irritants) [ESCom-11133171329]	Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands. [ESCom-11133171329 ESCom-11133171467 ESCom-11133171429]
General exposures; Closed systems (PROC_1)	Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
General exposures; Closed systems (PROC_2)	Covers use up to 1.0 h/day [ESCom-11133171521] Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
General exposures; Batch process; Closed systems (PROC_3)	Covers use up to 1.0 h/day [ESCom-11133171521] Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361] Ensure operation is undertaken outdoors. [ESCom-11133171425]
Laboratory activities (PROC_15)	Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure. [ESCom-10133224826] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Put lids on containers immediately after use. [ESCom-9267230301]</i>
Bulk transfers; Closed systems; Loading and unloading (PROC_8b)	Covers use up to 4.0 h/day [ESCom-11133171521] Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422] Wear a respirator conforming to EN140. [ESCom-15193135617]
Equipment cleaning and maintenance (PROC_8a, PROC_28)	Covers use up to 4.0 h/day [ESCom-11133171521] Provide a good standard of controlled ventilation (5 to 10 air changes per hour). [ESCom-12355002164] Drain down and flush system prior to equipment break-in or maintenance. [ESCom-11133171413] Wear a respirator conforming to EN140. [ESCom-15193135617] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Wear suitable coveralls to prevent exposure to the skin. [ESCom-11133171468] Clear spills immediately. [ESCom-9267230103]</i>
Storage (PROC_1)	Store substance within a closed system. [ESCom-11133171437]
Storage (PROC_2)	Covers use up to 1.0 h/day [ESCom-11133171521] Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Store substance within a closed system. [ESCom-11133171437]
Section 3 Exposure Estimation	

3.1. Health

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

Section 4 Guidance to check compliance with the Exposure Scenario**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.; Available hazard data do not enable the derivation of a DNEL for carcinogenic effects.; Available hazard data do not enable the derivation of a DNEL for aspiration effects.; Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.; Available hazard data do not enable the derivation of a DNEL for eye irritant effects.; Risk management measures are based on qualitative risk characterisation. [ESCom-11133171315; ESCom-10133224709; ESCom-11133171318; ESCom-16354132600; ESCom-11133171317; ESCom-11133171330; ESCom-11133171322]

GOTO USES

Section 1	
Title	
01b - Use as an intermediate; Closed systems; Level I	
Use Descriptor	
Sector(s) of Use	8, 9
Process Categories	1, 2, 3, 8a, 8b, 15, 28
Environmental Release Categories	
Specific Environmental Release Category	
Processes, tasks, activities covered	
Use of substance as an intermediate within closed or contained systems (not related to Strictly Controlled Conditions). Includes incidental exposures during recycling/recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure	Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure [ESCom-11133171335]
Concentration of substance in product	Covers percentage substance in the product up to 100 %. (unless stated differently) [ESCom-11133171310 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) [ESCom-11133171304 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Other Operational Conditions affecting exposure	Assumes a good basic standard of occupational hygiene is implemented [ESCom-11133171303] Covers use at ambient temperatures. (unless stated differently) [ESCom-10133224959 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Contributing Scenarios	
Specific Risk Management Measures and Operating Conditions	
General measures (skin irritants) [ESCom-10133224705]	Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS. [ESCom-10133224705 ESCom-11133170587 ESCom-15193135704 ESCom-10133224896 ESCom-9267230103 ESCom-15193135705 ESCom-12355002165]
General measures (carcinogens) [ESCom-10133224704]	Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance. Access to work area only for authorised persons. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Wear suitable coveralls to prevent exposure to the skin. Wear respiratory protection when its use is identified for certain contributing scenarios. For further specification, refer to section 8 of the SDS. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance. [ESCom-10133224704 ESCom-15193135706 ESCom-15193135707 ESCom-11133171413 ESCom-16354140200 ESCom-11133171457 ESCom-11133171468 ESCom-15193135708 ESCom-12355002165 ESCom-9267230103 ESCom-11133170664 ESCom-15193135709 ESCom-11133171359 ESCom-15193135710]
General measures (flammability) [ESCom-19350151900]	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8. [ESCom-19350151900 ESCom-16354135500]
General measures (aspiration hazard)	Do not ingest. If swallowed then seek immediate medical assistance. [ESCom-19350151700 ESCom-9313214709 ESCom-15193135612]
General exposures; Closed systems (PROC_2, PROC_1)	Covers percentage benzene in the final product up to <1% [] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
General exposures; Batch process; Closed systems (PROC_3)	Covers percentage benzene in the final product up to <1% [] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
Laboratory activities (PROC_15)	Covers percentage benzene in the final product up to <0.1%, <1%, <5%, <20%, <79% [] Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure. [ESCom-10133224826] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Put lids on containers immediately after use. [ESCom-9267230301]</i>
Bulk transfers; Closed systems; Loading and unloading (PROC_8b)	Covers percentage benzene in the final product up to <1% [] Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422]
Equipment cleaning and maintenance (PROC_8a, PROC_28)	Covers percentage benzene in the final product up to <1% [] Drain down and flush system prior to equipment break-in or maintenance. [ESCom-11133171413] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Wear suitable coveralls to prevent exposure to the skin. [ESCom-11133171468] Clear spills immediately. [ESCom-9267230103]</i>
Storage (PROC_2, PROC_1)	Covers percentage benzene in the final product up to <1% [] Store substance within a closed system. [ESCom-11133171437]
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	
Section 4 Guidance to check compliance with the Exposure Scenario	
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.; Available hazard data do not enable the derivation of a DNEL for carcinogenic effects.; Available hazard data do not enable the derivation of a DNEL for aspiration effects.; Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.; Risk management measures are based on qualitative risk characterisation. [ESCom-11133171315; ESCom-10133224709; ESCom-11133171318; ESCom-16354132600; ESCom-11133171317; ESCom-11133171322]	

GOTO USES

Section 1	
Title	
01b - Use as an intermediate; Closed systems; Level II	
Use Descriptor	
Sector(s) of Use	8, 9
Process Categories	1, 2, 3, 8a, 8b, 15, 28
Environmental Release Categories	
Specific Environmental Release Category	
Processes, tasks, activities covered	
Use of substance as an intermediate within closed or contained systems (not related to Strictly Controlled Conditions). Includes incidental exposures during recycling/recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure	Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure [ESCom-11133171335]
Concentration of substance in product	Covers percentage substance in the product up to 100 %. (unless stated differently) [ESCom-11133171310 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200] Covers percentage benzene in the final product up to <5% I]
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) [ESCom-11133171304 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Other Operational Conditions affecting exposure	Assumes a good basic standard of occupational hygiene is implemented [ESCom-11133171303] Covers use at ambient temperatures. (unless stated differently) [ESCom-10133224959 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Contributing Scenarios	
Specific Risk Management Measures and Operating Conditions	
General measures (skin irritants) [ESCom-10133224705]	Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS. [ESCom-10133224705 ESCom-11133170587 ESCom-15193135704 ESCom-10133224896 ESCom-9267230103 ESCom-15193135705 ESCom-12355002165]
General measures (carcinogens) [ESCom-10133224704]	Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance. Access to work area only for authorised persons. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Wear suitable coveralls to prevent exposure to the skin. Wear respiratory protection when its use is identified for certain contributing scenarios. For further specification, refer to section 8 of the SDS. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance. [ESCom-10133224704 ESCom-15193135706 ESCom-15193135707 ESCom-11133171413 ESCom-16354140200 ESCom-11133171457 ESCom-11133171468 ESCom-15193135708 ESCom-12355002165 ESCom-9267230103 ESCom-11133170664 ESCom-15193135709 ESCom-11133171359 ESCom-15193135710]
General measures (flammability) [ESCom-19350151900]	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8. [ESCom-19350151900 ESCom-16354135500]
General measures (aspiration hazard)	Do not ingest. If swallowed then seek immediate medical assistance. [ESCom-19350151700 ESCom-9313214709 ESCom-15193135612]
General exposures; Closed systems (PROC_1)	Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
General exposures; Closed systems (PROC_2)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
General exposures; Batch process; Closed systems (PROC_3)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
Laboratory activities (PROC_15)	Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure. [ESCom-10133224826] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Put lids on containers immediately after use. [ESCom-9267230301]</i>
Bulk transfers; Closed systems; Loading and unloading (PROC_8b)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422]
Equipment cleaning and maintenance (PROC_8a, PROC_28)	Covers use up to 4.0 h/day [ESCom-11133171521] Drain down and flush system prior to equipment break-in or maintenance. [ESCom-11133171413] Wear a respirator conforming to EN140. [ESCom-15193135617] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Wear suitable coveralls to prevent exposure to the skin. [ESCom-11133171468] Clear spills immediately. [ESCom-9267230103]</i>
Storage (PROC_1)	Store substance within a closed system. [ESCom-11133171437]
Storage (PROC_2)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Store substance within a closed system. [ESCom-11133171437]
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	
Section 4 Guidance to check compliance with the Exposure Scenario	
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.; Available hazard data do not enable the derivation of a DNEL for carcinogenic effects.; Available hazard data do not enable the derivation of a DNEL for aspiration effects.; Available hazard data do not enable the derivation of a DNEL for dermal defatting effects.; Risk management measures are based on qualitative risk characterisation. [ESCom-11133171315; ESCom-10133224709; ESCom-11133171318; ESCom-16354132600; ESCom-16354132200; ESCom-11133171322]

GOTO USES

Section 1	
Title	
12a - Use in fuel; Industrial; Closed systems; Level I	
Use Descriptor	
Sector(s) of Use	
Process Categories	1, 2, 8a, 8b, 16, 28
Environmental Release Categories	
Specific Environmental Release Category	
Processes, tasks, activities covered	
Covers the use as a fuel (or fuel additives and additive components) within closed or contained systems, including incidental exposures during activities associated with its transfer, use, equipment maintenance and handling of waste.	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure	Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure [ESCom-11133171335]
Concentration of substance in product	Covers percentage substance in the product up to 100 %. (unless stated differently) [ESCom-11133171310 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200] Covers percentage benzene in the final product up to <1% []
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) [ESCom-11133171304 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Other Operational Conditions affecting exposure	Assumes a good basic standard of occupational hygiene is implemented [ESCom-11133171303] Covers use at ambient temperatures. (unless stated differently) [ESCom-10133224959 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Contributing Scenarios	
Specific Risk Management Measures and Operating Conditions	
General measures (skin irritants) [ESCom-10133224705]	Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance. [ESCom-10133224704 ESCom-15193135706 ESCom-15193135707 ESCom-11133171413 ESCom-16354140200 ESCom-11133171457 ESCom-11133171468 ESCom-15193135708 ESCom-12355002165 ESCom-9267230103 ESCom-11133170664 ESCom-15193135709 ESCom-11133171359 ESCom-15193135710]
General measures (carcinogens) [ESCom-10133224704]	Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance. Access to work area only for authorised persons. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Wear suitable coveralls to prevent exposure to the skin. Wear respiratory protection when its use is identified for certain contributing scenarios. For further specification, refer to section 8 of the SDS. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance. [ESCom-10133224704 ESCom-15193135706 ESCom-15193135707 ESCom-11133171413 ESCom-16354140200 ESCom-11133171457 ESCom-11133171468 ESCom-15193135708 ESCom-12355002165 ESCom-9267230103 ESCom-11133170664 ESCom-15193135709 ESCom-11133171359 ESCom-15193135710]
General measures (flammability) [ESCom-19350151900]	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8. [ESCom-19350151900 ESCom-16354135500]
General measures (aspiration hazard)	Do not ingest. If swallowed then seek immediate medical assistance. [ESCom-19350151700 ESCom-9313214709 ESCom-15193135612]
Bulk transfers; Dedicated facility (PROC_8b)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422]
Drum/batch transfers; Dedicated facility (PROC_8b)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422]
General exposures; Closed systems (PROC_2, PROC_1)	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). [ESCom-11133171363] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
Use of fuels; Closed systems (PROC_16)	Handle substance within a closed system. [ESCom-11133171405]
Equipment cleaning and maintenance (PROC_8a, PROC_28)	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). [ESCom-11133171363] Drain down and flush system prior to equipment break-in or maintenance. [ESCom-11133171413] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Wear suitable coveralls to prevent exposure to the skin. [ESCom-11133171468]</i> <i>Clear spills immediately. [ESCom-9267230103]</i>
Storage (PROC_2, PROC_1)	Store substance within a closed system. [ESCom-11133171437]
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	
Section 4 Guidance to check compliance with the Exposure Scenario	
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.; Available hazard data do not enable the derivation of a DNEL for carcinogenic effects.; Available hazard data do not enable the derivation of a DNEL for aspiration effects.; Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.; Risk management measures are based on qualitative risk characterisation. [ESCom-11133171315; ESCom-10133224709; ESCom-11133171318; ESCom-16354132600; ESCom-11133171317; ESCom-11133171322]	

GOTO USES

Section 1	
Title	
12a - Use in fuel; Industrial; Closed systems; Level II	
Use Descriptor	
Sector(s) of Use	
Process Categories	1, 2, 8a, 8b, 16, 28
Environmental Release Categories	
Specific Environmental Release Category	
Processes, tasks, activities covered	
Covers the use as a fuel (or fuel additives and additive components) within closed or contained systems, including incidental exposures during activities associated with its transfer, use, equipment maintenance and handling of waste.	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure	Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure [ESCom-11133171335]
Concentration of substance in product	Covers percentage substance in the product up to 100 %. (unless stated differently) [ESCom-11133171310 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200] Covers percentage benzene in the final product up to <5% []
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) [ESCom-11133171304 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Other Operational Conditions affecting exposure	Assumes a good basic standard of occupational hygiene is implemented [ESCom-11133171303] Covers use at ambient temperatures. (unless stated differently) [ESCom-10133224959 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Contributing Scenarios	
Specific Risk Management Measures and Operating Conditions	
General measures (skin irritants) [ESCom-10133224705]	Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS. [ESCom-10133224705 ESCom-11133170587 ESCom-15193135704 ESCom-10133224896 ESCom-9267230103 ESCom-15193135705 ESCom-12355002165]
General measures (carcinogens) [ESCom-10133224704]	Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance. Access to work area only for authorised persons. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Wear suitable coveralls to prevent exposure to the skin. Wear respiratory protection when its use is identified for certain contributing scenarios. For further specification, refer to section 8 of the SDS. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance. [ESCom-10133224704 ESCom-15193135706 ESCom-15193135707 ESCom-11133171413 ESCom-16354140200 ESCom-11133171457 ESCom-11133171468 ESCom-15193135708 ESCom-12355002165 ESCom-9267230103 ESCom-11133170664 ESCom-15193135709 ESCom-11133171359 ESCom-15193135710]
General measures (flammability) [ESCom-19350151900]	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8. [ESCom-19350151900 ESCom-16354135500]
General measures (aspiration hazard)	Do not ingest. If swallowed then seek immediate medical assistance. [ESCom-19350151700 ESCom-9313214709 ESCom-15193135612]
Bulk transfers; Dedicated facility (PROC_8b)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422]
Drum/batch transfers; Dedicated facility (PROC_8b)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422]
General exposures; Closed systems (PROC_1)	Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
General exposures; Closed systems (PROC_2)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
Use of fuels; Closed systems (PROC_16)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422] Handle substance within a closed system. [ESCom-11133171405]
Equipment cleaning and maintenance (PROC_8a, PROC_28)	Covers use up to 4.0 h/day [ESCom-11133171521] Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). [ESCom-11133171363] Drain down and flush system prior to equipment break-in or maintenance. [ESCom-11133171413] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. Wear suitable coveralls to prevent exposure to the skin. [ESCom-11133171468] Clear spills immediately. [ESCom-9267230103]
Storage (PROC_1)	Store substance within a closed system. [ESCom-11133171437]
Storage (PROC_2)	Provide extract ventilation to points where emissions occur. [ESCom-11133171412] Store substance within a closed system. [ESCom-11133171437]
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	
Section 4 Guidance to check compliance with the Exposure Scenario	
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.; Available hazard data do not enable the derivation of a DNEL for carcinogenic effects.; Available hazard data do not enable the derivation of a DNEL for aspiration effects.; Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.; Risk management measures are based on qualitative risk characterisation. [ESCom-11133171315; ESCom-10133224709; ESCom-11133171318; ESCom-16354132600; ESCom-11133171317; ESCom-11133171322]

GOTO USES

Section 1	
Title	
12b - Use in fuel; Professional	
Use Descriptor	
Sector(s) of Use	
Process Categories	1, 2, 8a, 8b, 16, 28
Environmental Release Categories	
Specific Environmental Release Category	
Processes, tasks, activities covered	
Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure	Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure [ESCom-11133171335]
Concentration of substance in product	Covers percentage substance in the product up to 100 %. (unless stated differently) [ESCom-11133171310 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200] Covers percentage benzene in the final product up to <0.1% [] Covers percentage n-hexane in the final product up to <3% [] Covers percentage toluene in the final product up to <3% []
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) [ESCom-11133171304 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Other Operational Conditions affecting exposure	Assumes a good basic standard of occupational hygiene is implemented [ESCom-11133171303] Covers use at ambient temperatures. (unless stated differently) [ESCom-10133224959 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Contributing Scenarios	
Specific Risk Management Measures and Operating Conditions	
General measures (skin irritants) [ESCom-10133224705]	Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS. [ESCom-10133224705 ESCom-11133170587 ESCom-15193135704 ESCom-10133224896 ESCom-9267230103 ESCom-15193135705 ESCom-12355002165]
General measures (flammability) [ESCom-19350151900]	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8. [ESCom-19350151900 ESCom-16354135500]
General measures (aspiration hazard)	Do not ingest. If swallowed then seek immediate medical assistance. [ESCom-19350151700 ESCom-9313214709 ESCom-15193135612]
Bulk transfers; Dedicated facility (PROC_8b)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422]
Drum/batch transfers; Dedicated facility (PROC_8b)	Use drum pumps. [ESCom-11133171411] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Ensure no splashing occurs during transfer. [ESCom-16173221409]</i>
Refuelling (PROC_8b)	Use drum pumps. [ESCom-11133171411] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Ensure no splashing occurs during transfer. [ESCom-16173221409]</i>
General exposures; Closed systems (PROC_2, PROC_1)	Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
Use of fuels; Closed systems (PROC_16)	Handle substance within a closed system. [ESCom-11133171405]
Equipment cleaning and maintenance (PROC_8a, PROC_28)	Covers use up to 4.0 h/day [ESCom-11133171521] Drain down and flush system prior to equipment break-in or maintenance. [ESCom-11133171413] Wear a respirator conforming to EN140. [ESCom-15193135617] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. <i>Wear suitable coveralls to prevent exposure to the skin. [ESCom-11133171468]</i> <i>Clear spills immediately. [ESCom-9267230103]</i>
Storage (PROC_2, PROC_1)	Store substance within a closed system. [ESCom-11133171437]
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	
Section 4 Guidance to check compliance with the Exposure Scenario	
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.; Available hazard data do not enable the derivation of a DNEL for aspiration effects.; Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.; Risk management measures are based on qualitative risk characterisation. [ESCom-11133171315; ESCom-10133224709; ESCom-16354132600; ESCom-11133171317; ESCom-11133171322]	

GOTO USES

Section 1	
Title	
12b - Use in fuel; Professional; Closed systems	
Use Descriptor	
Sector(s) of Use	
Process Categories	1, 2, 8a, 8b, 16, 28
Environmental Release Categories	
Specific Environmental Release Category	
Processes, tasks, activities covered	
Covers the use as a fuel (or fuel additives and additive components) within closed or contained systems, including incidental exposures during activities associated with its transfer, use, equipment maintenance and handling of waste.	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure	Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure [ESCom-11133171335]
Concentration of substance in product	Covers percentage substance in the product up to 100 %. (unless stated differently) [ESCom-11133171310 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200] Covers percentage benzene in the final product up to <1% I]
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) [ESCom-11133171304 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Other Operational Conditions affecting exposure	Assumes a good basic standard of occupational hygiene is implemented [ESCom-11133171303] Covers use at ambient temperatures. (unless stated differently) [ESCom-10133224959 ESCom-18309152101 ESCom-16173221408 ESCom-18309152200]
Contributing Scenarios	
Specific Risk Management Measures and Operating Conditions	
General measures (skin irritants) [ESCom-10133224705]	Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS. [ESCom-10133224705 ESCom-11133170587 ESCom-15193135704 ESCom-10133224896 ESCom-9267230103 ESCom-15193135705 ESCom-12355002165]
General measures (carcinogens) [ESCom-10133224704]	Consider technical advances and process upgrades (including automation) for the elimination of releases. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance. Access to work area only for authorised persons. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Wear suitable coveralls to prevent exposure to the skin. Wear respiratory protection when its use is identified for certain contributing scenarios. For further specification, refer to section 8 of the SDS. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point. Ensure safe systems of work or equivalent arrangements are in place to manage risks. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance. [ESCom-10133224704 ESCom-15193135706 ESCom-15193135707 ESCom-11133171413 ESCom-16354140200 ESCom-11133171457 ESCom-11133171468 ESCom-15193135708 ESCom-12355002165 ESCom-9267230103 ESCom-11133170664 ESCom-15193135709 ESCom-11133171359 ESCom-15193135710]
General measures (flammability) [ESCom-19350151900]	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8. [ESCom-19350151900 ESCom-16354135500]
General measures (aspiration hazard)	Do not ingest. If swallowed then seek immediate medical assistance. [ESCom-19350151700 ESCom-9313214709 ESCom-15193135612]
Bulk transfers; Dedicated facility (PROC_8b)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422]
Drum/batch transfers; Dedicated facility (PROC_8b)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422]
Refuelling (PROC_8b)	Ensure material transfers are under containment or extract ventilation. [ESCom-11133171422]
General exposures; Closed systems (PROC_2, PROC_1)	Handle substance within a closed system. [ESCom-11133171405] Sample via a closed loop or other system to avoid exposure. [ESCom-11133171361]
Use of fuels; Closed systems (PROC_16)	Handle substance within a closed system. [ESCom-11133171405]
Equipment cleaning and maintenance (PROC_8a, PROC_28)	Covers use up to 4.0 h/day [ESCom-11133171521] Drain down and flush system prior to equipment break-in or maintenance. [ESCom-11133171413] Wear a respirator conforming to EN140. [ESCom-15193135617] Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. Wear suitable coveralls to prevent exposure to the skin. [ESCom-11133171468] Clear spills immediately. [ESCom-9267230103]
Storage (PROC_2, PROC_1)	Store substance within a closed system. [ESCom-11133171437]
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.	
Section 4 Guidance to check compliance with the Exposure Scenario	
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.; Available hazard data do not enable the derivation of a DNEL for carcinogenic effects.; Available hazard data do not enable the derivation of a DNEL for aspiration effects.; Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.; Risk management measures are based on qualitative risk characterisation. [ESCom-11133171315; ESCom-10133224709; ESCom-11133171318; ESCom-16354132600; ESCom-11133171317; ESCom-11133171322]	

GOTO USES

Section 1	
Title	
12c - Use in fuel; Consumer	
Use Descriptor	
Sector(s) of Use	
Product Categories	13
Environmental Release Categories	
Specific Environmental Release Category	
Processes, tasks, activities covered	
Covers consumer uses in liquid fuels	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of consumer exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure	-
Concentration of substance in product	-
Frequency and duration of use/exposure	Covers use up to 1.0 events per day [ESCom-11133171521]
Other Operational Conditions affecting exposure	-
Product Category	Specific Risk Management Measures and Operating Conditions
General measures (skin irritants) [ESCom-10133224705]	; Ensure there is no direct skin contact with product; Remove accidental skin contamination. []
General measures (flammability) [ESCom-19350151900]	For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8. [ESCom-19350151900 ESCom-16354135500]
General measures (aspiration hazard)	Do not ingest. If swallowed then seek immediate medical assistance. [ESCom-19350151700 ESCom-9313214709 ESCom-15193135612]
Fuels; Liquid; Automotive refuelling; (; Gasoline;) (PC_13) <i>Based on Concawe_SCED_13_1_a</i>	Covers concentrations up to 100 %; Covers percentage benzene in the final product up to <1% [] For each use event, covers use amounts up to 37500.0 g/event [ESCom-11133171520] Exposure duration = 0.05 h/event [ESCom-11133170461] Outdoor use [ESCom-9313213238] Assumes that potential dermal contact is limited to palm of one hand []
Fuels; Liquid; Recreational vehicles; (; Quad bikes or similar;) (PC_13) <i>Based on Concawe_SCED_13_7_a</i>	Covers concentrations up to 100 %; Covers percentage benzene in the final product up to <1% [] For each use event, covers use amounts up to 7500.0 g/event [ESCom-11133171520] Exposure duration = 0.017 h/event [ESCom-11133170461] Outdoor use [ESCom-9313213238] Assumes that potential dermal contact is limited to palm of one hand []
Fuels; Liquid; Garden equipment (PC_13) <i>Based on Concawe_SCED_13_4_a</i>	Covers concentrations up to 100 %; Covers percentage benzene in the final product up to <0.1%; Covers percentage n-hexane in the final product up to <3%; Covers percentage toluene in the final product up to <3% [] For each use event, covers use amounts up to 750.0 g/event [ESCom-11133171520] Exposure duration = 0.033 h/event [ESCom-11133170461] Assumes that potential dermal contact is limited to inside hands / one hand / palm of hands. [ESCom-12355002181]
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.	
Section 4 Guidance to check compliance with the Exposure Scenario	
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.; Available hazard data do not enable the derivation of a DNEL for carcinogenic effects.; Available hazard data do not enable the derivation of a DNEL for aspiration effects.; Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.; Risk management measures are based on qualitative risk characterisation. [ESCom-11133171315; ESCom-11133171318; ESCom-16354132600; ESCom-11133171317; ESCom-11133171322]	

GOTO USES

Section 1	
Title	
01 - Manufacture of substance	
Use Descriptor	
Sector(s) of Use	
Process Categories	
Environmental Release Categories	1
Specific Environmental Release Category	ESVOC SpERC 1.1.v1
Processes, tasks, activities covered	
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.	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.2 Control of environmental exposure	
Product characteristics	
Substance is complex UVCB. [ESCom-11133171600] Predominantly hydrophobic. [ESCom-11133171601]	
Amounts used	
Fraction of EU tonnage used in region	0.1
Regional use tonnage (tonnes/year)	1.1E+07
Fraction of Regional tonnage used locally	4.5E-01
Annual site tonnage (tonnes/year)	5.0E+06
Maximum daily site tonnage (kg/day)	1.7E+07
Frequency and duration of use	
Continuous release. [ESCom-10133212701]	
Emission days (days/year)	300
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from process (initial release prior to RMM)	8.5E-04
Release fraction to wastewater from process (initial release prior to RMM)	1.5E-05
Release fraction to soil from process (initial release prior to RMM)	0.0001
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used. [ESCom-10133220229]	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by humans via indirect exposure (primarily inhalation). [TCR1k]	
Prevent discharge of undissolved substance to or recover from onsite wastewater. [ESCom-10133221223]	
If discharging to domestic sewage treatment plant, no onsite wastewater treatment required [TCR9]	
Treat air emission to provide a typical removal efficiency of (%)	9.0E+01
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency >= (%)	94.4
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%)	0.0
Organisation measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils. [ESCom-10133221228] Sludge should be incinerated, contained or reclaimed. [ESCom-10133221229]	
Conditions and measures related to municipal sewage treatment plant	
Not applicable as there is no release to wastewater. [ESCom-10133222100]	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.1
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.1
Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d)	1.9E+07
Assumed domestic sewage treatment plant flow (m3/d)	1.0E+04
Conditions and measures related to external treatment of waste for disposal	
During manufacturing no waste of the substance is generated. [ESCom-10133222904]	
Conditions and measures related to external recovery of waste	
During manufacturing no waste of the substance is generated. [ESCom-10133222904]	
Section 3 Exposure Estimation	
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate environmental exposure with the PETRORISK model. [ESCom-11133171701]	
Section 4 Guidance to check compliance with the Exposure Scenario	
4.2. Environment	
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. [ESCom-10133223600] Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. [ESCom-10133223601] Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. [ESCom-10133223602] Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html). [ESCom-10133223603]	
Maximum Risk Characterisation Ratio for Air Emissions RCRair	8.1E-01
Maximum Risk Characterisation Ratio for Wastewater Emissions RCRwater	7.1E-01

GOTO USES

Section 1	
Title	
02 - Formulation & (re)packing of substances and mixtures	
Use Descriptor	
Sector(s) of Use	
Process Categories	
Environmental Release Categories	2
Specific Environmental Release Category	ESVOC SpERC 2.2.v1
Processes, tasks, activities covered	
Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tableting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.2 Control of environmental exposure	
Product characteristics	
Substance is complex UVCB. [ESCom-11133171600] Predominantly hydrophobic. [ESCom-11133171601]	
Amounts used	
Fraction of EU tonnage used in region	0.1
Regional use tonnage (tonnes/year)	1.0E+07
Fraction of Regional tonnage used locally	3.0E-03
Annual site tonnage (tonnes/year)	3.0E+04
Maximum daily site tonnage (kg/day)	1.0E+05
Frequency and duration of use	
Continuous release. [ESCom-10133212701]	
Emission days (days/year)	300
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from process (after typical onsite RMMs, consistent with EU Solvent Emissions Directive requirements)	1.5E-02
Release fraction to wastewater from process (initial release prior to RMM)	6.0E-04
Release fraction to soil from process (initial release prior to RMM)	0.0001
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used. [ESCom-10133220229]	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by freshwater sediment. [TCR1b]	
Prevent discharge of undissolved substance to or recover from onsite wastewater. [ESCom-10133221223]	
If discharging to domestic sewage treatment plant, no onsite wastewater treatment required [TCR9]	
Treat air emission to provide a typical removal efficiency of (%)	0.0E+00
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency >= (%)	95.3
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%)	0.0
Organisation measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils. [ESCom-10133221228] Sludge should be incinerated, contained or reclaimed. [ESCom-10133221229]	
Conditions and measures related to municipal sewage treatment plant	
Not applicable as there is no release to wastewater. [ESCom-10133222100]	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.1
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.1
Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d)	1.1E+05
Assumed domestic sewage treatment plant flow (m3/d)	2.0E+03
Conditions and measures related to external treatment of waste for disposal	
External treatment and disposal of waste should comply with applicable local and/or national regulations. [ESCom-10133222903]	
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable local and/or national regulations. [ESCom-10133223500]	
Section 3 Exposure Estimation	
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate environmental exposure with the PETRORISK model. [ESCom-11133171701]	
Section 4 Guidance to check compliance with the Exposure Scenario	
4.2. Environment	
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. [ESCom-10133223600] Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. [ESCom-10133223601] Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. [ESCom-10133223602] Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html). [ESCom-10133223603]	
Maximum Risk Characterisation Ratio for Air Emissions RCRair	8.2E-01
Maximum Risk Characterisation Ratio for Wastewater Emissions RCRwater	8.4E-01

GOTO USES

Section 1	
Title	
01b - Use of substance as intermediate	
Use Descriptor	
Sector(s) of Use	
Process Categories	
Environmental Release Categories	6a
Specific Environmental Release Category	ESVOC SpERC 6.1a.v1
Processes, tasks, activities covered	
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).	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.2 Control of environmental exposure	
Product characteristics	
Substance is complex UVCB. [ESCom-11133171600] Predominantly hydrophobic. [ESCom-11133171601]	
Amounts used	
Fraction of EU tonnage used in region	0.1
Regional use tonnage (tonnes/year)	6.2E+05
Fraction of Regional tonnage used locally	2.4E-02
Annual site tonnage (tonnes/year)	1.5E+04
Maximum daily site tonnage (kg/day)	5.0E+04
Frequency and duration of use	
Continuous release. [ESCom-10133212701]	
Emission days (days/year)	300
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from process (initial release prior to RMM)	2.5E-02
Release fraction to wastewater from process (initial release prior to RMM)	1.3E-03
Release fraction to soil from process (initial release prior to RMM)	0.001
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used. [ESCom-10133220229]	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by freshwater sediment. [TCR1b]	
Prevent discharge of undissolved substance to or recover from onsite wastewater. [ESCom-10133221223]	
If discharging to domestic sewage treatment plant, no onsite wastewater treatment required [TCR9]	
Treat air emission to provide a typical removal efficiency of (%)	8.0E+01
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency >= (%)	95.5
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%)	0.0
Organisation measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils. [ESCom-10133221228] Sludge should be incinerated, contained or reclaimed. [ESCom-10133221229]	
Conditions and measures related to municipal sewage treatment plant	
Not applicable as there is no release to wastewater. [ESCom-10133222100]	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.1
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.1
Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d)	5.7E+04
Assumed domestic sewage treatment plant flow (m3/d)	2.0E+03
Conditions and measures related to external treatment of waste for disposal	
This substance is consumed during use and no waste of the substance is generated. [ESCom-10133223502]	
Conditions and measures related to external recovery of waste	
This substance is consumed during use and no waste of the substance is generated. [ESCom-10133223502]	
Section 3 Exposure Estimation	
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate environmental exposure with the PETRORISK model. [ESCom-11133171701]	
Section 4 Guidance to check compliance with the Exposure Scenario	
4.2. Environment	
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. [ESCom-10133223600] Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. [ESCom-10133223601] Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. [ESCom-10133223602] Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html). [ESCom-10133223603]	
Maximum Risk Characterisation Ratio for Air Emissions RCRair	1.6E-01
Maximum Risk Characterisation Ratio for Wastewater Emissions RCRwater	8.8E-01

GOTO USES

Section 1	
Title	
12a - Use in fuel: Industrial	
Use Descriptor	
Sector(s) of Use	
Process Categories	
Environmental Release Categories	7
Specific Environmental Release Category	ESVOC SpERC 7.12a.v1
Processes, tasks, activities covered	
Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.2 Control of environmental exposure	
Product characteristics	
Substance is complex UVCB. [ESCom-11133171600] Predominantly hydrophobic. [ESCom-11133171601]	
Amounts used	
Fraction of EU tonnage used in region	0.1
Regional use tonnage (tonnes/year)	9.9E+05
Fraction of Regional tonnage used locally	1.0E+00
Annual site tonnage (tonnes/year)	9.9E+05
Maximum daily site tonnage (kg/day)	3.3E+06
Frequency and duration of use	
Continuous release. [ESCom-10133212701]	
Emission days (days/year)	300
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from process (initial release prior to RMM)	5.0E-02
Release fraction to wastewater from process (initial release prior to RMM)	1.0E-05
Release fraction to soil from process (initial release prior to RMM)	0
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used. [ESCom-10133220229]	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by freshwater sediment. [TCR1b]	
If discharging to domestic sewage treatment plant, no onsite wastewater treatment required [TCR9]	
Treat air emission to provide a typical removal efficiency of (%)	9.5E+01
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency >= (%)	91.5
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%)	0.0
Organisation measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils. [ESCom-10133221228] Sludge should be incinerated, contained or reclaimed. [ESCom-10133221229]	
Conditions and measures related to municipal sewage treatment plant	
Not applicable as there is no release to wastewater. [ESCom-10133222100]	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.1
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.1
Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d)	7.1E+06
Assumed domestic sewage treatment plant flow (m3/d)	2.0E+03
Conditions and measures related to external treatment of waste for disposal	
Combustion emissions limited by required exhaust emission controls. [ESCom-10133222901] Combustion emissions considered in regional exposure assessment. [ESCom-10133222902] External treatment and disposal of waste should comply with applicable local and/or national regulations. [ESCom-10133222903]	
Conditions and measures related to external recovery of waste	
This substance is consumed during use and no waste of the substance is generated. [ESCom-10133223502]	
Section 3 Exposure Estimation	
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate environmental exposure with the PETRORISK model. [ESCom-11133171701]	
Section 4 Guidance to check compliance with the Exposure Scenario	
4.2. Environment	
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. [ESCom-10133223600] Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. [ESCom-10133223601] Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. [ESCom-10133223602] Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html). [ESCom-10133223603]	
Maximum Risk Characterisation Ratio for Air Emissions RCRair	3.0E-02
Maximum Risk Characterisation Ratio for Wastewater Emissions RCRwater	4.6E-01

GOTO USES

Section 1	
Title	
12b - Use in fuel: Professional	
Use Descriptor	
Sector(s) of Use	
Process Categories	
Environmental Release Categories	9a, 9b
Specific Environmental Release Category	ESVOC SpERC 9.12b.v1
Processes, tasks, activities covered	
Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.2 Control of environmental exposure	
Product characteristics	
Substance is complex UVCB. [ESCom-11133171600] Predominantly hydrophobic. [ESCom-11133171601]	
Amounts used	
Fraction of EU tonnage used in region	0.1
Regional use tonnage (tonnes/year)	9.1E+05
Fraction of Regional tonnage used locally	5.0E-04
Annual site tonnage (tonnes/year)	4.5E+02
Maximum daily site tonnage (kg/day)	1.2E+03
Frequency and duration of use	
Continuous release. [ESCom-10133212701]	
Emission days (days/year)	365
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from wide dispersive use (regional use only)	5.0E-03
Release fraction to wastewater from wide dispersive use	1.0E-06
Release fraction to soil from wide dispersive use (regional use only)	0.00025
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used. [ESCom-10133220229]	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by humans via indirect exposure (primarily inhalation). [TCR1k]	
No wastewater treatment required [TCR6]	
Treat air emission to provide a typical removal efficiency of (%)	N/A
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency >= (%)	0.0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of >= (%)	0.0
Organisation measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils. [ESCom-10133221228] Sludge should be incinerated, contained or reclaimed. [ESCom-10133221229]	
Conditions and measures related to municipal sewage treatment plant	
Not applicable as there is no release to wastewater. [ESCom-10133222100]	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.1
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	96.1
Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d)	5.2E+04
Assumed domestic sewage treatment plant flow (m3/d)	2.0E+03
Conditions and measures related to external treatment of waste for disposal	
Combustion emissions limited by required exhaust emission controls. [ESCom-10133222901] Combustion emissions considered in regional exposure assessment. [ESCom-10133222902] External treatment and disposal of waste should comply with applicable local and/or national regulations. [ESCom-10133222903]	
Conditions and measures related to external recovery of waste	
This substance is consumed during use and no waste of the substance is generated. [ESCom-10133223502]	
Section 3 Exposure Estimation	
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate environmental exposure with the PETRORISK model. [ESCom-11133171701]	
Section 4 Guidance to check compliance with the Exposure Scenario	
4.2. Environment	
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. [ESCom-10133223600] Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. [ESCom-10133223601] Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. [ESCom-10133223602] Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html). [ESCom-10133223603]	
Maximum Risk Characterisation Ratio for Air Emissions RCRair	2.1E-02
Maximum Risk Characterisation Ratio for Wastewater Emissions RCRwater	1.8E-02

GOTO USES

Section 1	
Title	
12c - Use in fuel: Consumer	
Use Descriptor	
Sector(s) of Use	
Product Categories	
Environmental Release Categories	9a, 9b
Specific Environmental Release Category	ESVOC SpERC 9.12c.v1
Processes, tasks, activities covered	
Covers consumer uses in liquid fuels	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.2 Control of environmental exposure	
Product characteristics	
Substance is complex UVCB. [ESCom-11133171600] Predominantly hydrophobic. [ESCom-11133171601]	
Amounts used	
Fraction of EU tonnage used in region	0.1
Regional use tonnage (tonnes/year)	8.1E+06
Fraction of Regional tonnage used locally	5.0E-04
Annual site tonnage (tonnes/year)	4.1E+03
Maximum daily site tonnage (kg/day)	1.1E+04
Frequency and duration of use	
Continuous release. [ESCom-10133212701]	
Emission days (days/year)	365
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from wide dispersive use (regional use only)	4.0E-03
Release fraction to wastewater from wide dispersive use	2.0E-07
Release fraction to soil from wide dispersive use (regional use only)	0.00005
Conditions and measures related to municipal sewage treatment plant	
Not applicable as there is no release to wastewater. [ESCom-10133222100]	
Estimated substance removal from wastewater via domestic sewage treatment (%)	96.1
Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d)	4.6E+05
Assumed domestic sewage treatment plant flow (m3/d)	2.0E+03
Conditions and measures related to external treatment of waste for disposal	
Combustion emissions limited by required exhaust emission controls. [ESCom-10133222901] Combustion emissions considered in regional exposure assessment. [ESCom-10133222902] External treatment and disposal of waste should comply with applicable local and/or national regulations. [ESCom-10133222903]	
Conditions and measures related to external recovery of waste	
This substance is consumed during use and no waste of the substance is generated. [ESCom-10133223502]	
Section 3 Exposure Estimation	
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate environmental exposure with the PETRORISK model. [ESCom-11133171701]	
Section 4 Guidance to check compliance with the Exposure Scenario	
4.2. Environment	
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. [ESCom-10133223600]	
Maximum Risk Characterisation Ratio for Air Emissions RCRair	2.1E-02
Maximum Risk Characterisation Ratio for Wastewater Emissions RCRwater	1.8E-02