SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Supersedes Date	Revision date	Revision Number
01/01/2023	15/02/2024	1.01
		Country-Language: FIN-EN

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

1.1. Product identifier

Product Name Neste alkylate gasoline, 4-stroke

Synonyms 130130, 130990

Product Code(s) 10529

Safety data sheet number 10529

Unique Formula Identifier (UFI) 3Q1N-YAVV-VY0S-FHKQ

Pure substance/mixture Mixture

Contains Naphtha (petroleum), full-range alkylate, butane-contg., Isopentane

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

Recommended use
Distribution of substance
Formulation & (re)packing of substances and mixtures
Use as a fuel

1.3. Details of the supplier of the safety data sheet

Supplier
Neste Oyj
Keilaranta 21, Espoo, P.O.B. 95, FIN-00095 NESTE, FINLAND
Tel. +358 10 45811
SDS@neste.com (chemical safety)

1.4. Emergency telephone number

Emergency Telephone :

Emergency Telephone - §45 - (EC)1272/2008	
Europe	**112**
Denmark	Giftlinjen: +45 8212 1212
Estonia	Poison information telephone number: 16662, calling from abroad: (+372) 7943 794
Finland	+358 800 147 111, +358 9 471 977, Poison Information Centre
France	France: Numéro ORFILA (INRS) : + 33 (0)1 45 42 59 59.
Germany	+49 32 211121704, Chemwatch Emergency Response Phone Number
Latvia	Valsts toksikoloģijas centrs: (+371) 6704 2473
Lithuania	Neatidėliotina informacija apsinuodijus: +370 5 236 20 52.
Netherlands	NVIC (088 755 8000), Only for the purpose of informing medical personnel in case of acute intoxications.
Norway	Norway: Poison Information Centre +47 22 59 13 00.
Poland	+48 22 208 6439, Chemwatch Emergency Response Telephone Number
Sweden	När det är akut: 112, begär giftinformation.

	I mindre akuta fall 010-456 6700, Giftinformationscentralens direktnummer

SECTION 2: Hazards identification

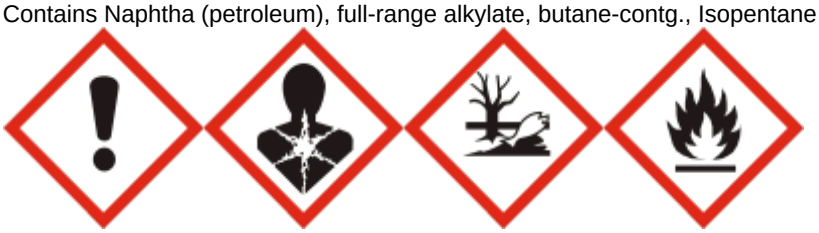
2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Flammable liquids	Category 1 - (H224)
Skin corrosion/irritation	Category 2 - (H315)
Specific target organ toxicity — single exposure	Category 3 - (H336)
Category 3 Narcotic effects	
Aspiration hazard	Category 1 - (H304)
Chronic aquatic toxicity	Category 2 - (H411)

2.2. Label elements

Contains Naphtha (petroleum), full-range alkylate, butane-contg., Isopentane



Signal word
Danger

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
H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)
P102 - Keep out of reach of children
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P273 - Avoid release to the environment
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
P331 - Do NOT induce vomiting
P501 - Dispose of contents/containers in accordance with local regulations

2.3. Other hazards

Volatile. Vapours may form explosive mixture with air. Risk of soil and ground water contamination.

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

This product does not contain substances considered to have endocrine disrupting properties at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Naphtha (petroleum), full-range alkylate, butane-contg. 68527-27-5	65 - 80	01-2119471477-29	271-267-0	Flam. Liq. 1 (H224) Asp. Tox. 1 (H304) Skin Irrit. 2 (H315) STOT SE 3 (H336) Aq. Chronic 2 (H411)	-	-	-
Isopentane 78-78-4	20 - 35	01-2119475602-38	201-142-8	Flam. Liq. 1 (H224) Asp. Tox. 1 (H304) STOT SE 3 (H336) Aq. Chronic 2 (H411)	-	-	-

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Additional information
Mixture of a petroleum product and additives. Benzene (CAS 71-43-2) < 0,1 %. n-hexane (CAS 110-54-3) < 0,5 %. Total aromatics at maximum: 0,5%.

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation P340 - Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately if symptoms occur. If breathing is difficult, (trained personnel should) give oxygen.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. In the case of skin irritation or allergic reactions see a doctor.

Ingestion ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. Do NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Never give anything by mouth to an unconscious person. Get immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms May irritate eyes and skin. Vapours in high concentrations are narcotic. May cause nausea, headache, dizziness and intoxication. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

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

Note to doctors Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical H224 - Extremely flammable liquid and vapour. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Containers may explode when heated.

Hazardous combustion products Carbon dioxide (CO2). Carbon monoxide.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Wear positive pressure self-contained breathing apparatus (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Avoid breathing vapours or mists. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

For emergency responders Prevent unauthorized access. Keep people away from and upwind of spill/leak.

Vapours may accumulate in confined areas (basement, tanks, hopper/tank cars, etc.). Vapours can form explosive mixtures with air. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges.

6.2. Environmental precautions

Environmental precautions Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air). Risk of soil and ground water contamination.

6.3. Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Keep out of drains, sewers, ditches and waterways.

Methods for cleaning up Take up with sand, earth or other non-combustible absorbent material. Immediately start clean-up of the liquid and contaminated soil. Large spills should be collected mechanically (remove by pumping) for disposal. Pay attention to the fire and health hazards caused by the product.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See Section 7 and 8 for more information,

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling The product contains volatile substances which may spread in the atmosphere. Vapours may accumulate on the floor and in low-lying areas. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use explosion-proof electrical equipment.

Avoid breathing vapours or mists. Use only outdoors or in a well-ventilated area. Try to avoid product volatilization during handling and transferring. Avoid contact with skin, eyes or clothing. Use personal protective equipment and/or local ventilation when needed. During tank operations follow special instructions (risk of oxygen displacement and hydrocarbons).

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Clear up spills immediately and dispose of waste safely.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Flammable liquid storage. Store in accordance with local regulations. Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from direct sunlight. Store in a demarcated bunded area to prevent release to drains and/or watercourses.

7.3. Specific end use(s)

Risk Management Methods (RMM) Not applicable.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits Solvent naphtha, group 1: 500 mg/m³ (8h), HTP 2020/FIN.
The individual limit values can be applied for the hydrocarbons.

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Isopentane 78-78-4	TWA: 1000 ppm TWA: 3000 mg/m³	TWA: 600 ppm TWA: 1800 mg/m³ STEL 1200 ppm STEL 3600 mg/m³	TWA: 600 ppm TWA: 1800 mg/m³ STEL: 750 ppm STEL: 2250 mg/m³	TWA: 1000 ppm TWA: 3000.0 mg/m³	TWA: 1000 ppm TWA: 3000 mg/m³
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Isopentane 78-78-4	TWA: 1000 ppm TWA: 3000 mg/m³	TWA: 3000 mg/m³ Ceiling: 4500 mg/m³	TWA: 500 ppm TWA: 1500 mg/m³ STEL: 1000 ppm STEL: 3000 mg/m³	TWA: 1000 ppm TWA: 3000 mg/m³	TWA: 500 ppm TWA: 1500 mg/m³ STEL: 630 ppm STEL: 1900 mg/m³
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
Isopentane 78-78-4	TWA: 1000 ppm TWA: 3000 mg/m³	TWA: 1000 ppm TWA: 3000 mg/m³	TWA: 1000 ppm TWA: 3000 mg/m³ Peak: 2000 ppm Peak: 6000 mg/m³	TWA: 1000 ppm TWA: 2950 mg/m³	TWA: 3000 mg/m³ TWA: 1000 ppm
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania

Isopentane 78-78-4	TWA: 1000 ppm STEL: 3000 ppm	TWA: 667 ppm TWA: 2000 mg/m³	TWA: 1000 ppm TWA: 2951 mg/m³	TWA: 1000 ppm TWA: 3000 mg/m³ STEL: 300 mg/m³	TWA: 1000 ppm TWA: 3000 mg/m³
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Isopentane 78-78-4	TWA: 1000 ppm TWA: 3000 mg/m³	TWA: 1000 ppm TWA: 3000 mg/m³	TWA: 600 ppm TWA: 1800 mg/m³	TWA: 250 ppm TWA: 750 mg/m³ STEL: 312.5 ppm STEL: 937.5 mg/m³	TWA: 3000 mg/m³
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Isopentane 78-78-4	TWA: 1000 ppm TWA: 3000 mg/m³	TWA: 1000 ppm TWA: 3000 mg/m³ STEL: 1000 mg/m³	TWA: 1000 ppm TWA: 3000 mg/m³	TWA: 1000 ppm TWA: 3000 mg/m³ STEL: 6000 mg/m³ STEL: 2000 ppm	TWA: 1000 ppm TWA: 3000 mg/m³

Chemical name	Sweden	Switzerland	United Kingdom
Isopentane 78-78-4	Vägledande KGV: 750 ppm Vägledande KGV: 2000 mg/m³ NGV: 600 ppm NGV: 1800 mg/m³	TWA: 600 ppm TWA: 1800 mg/m³ STEL: 1200 ppm STEL: 3600 mg/m³	TWA: 600 ppm TWA: 1800 mg/m³ STEL: 1800 ppm STEL: 5400 mg/m³

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
Naphtha (petroleum), full-range alkylate, butane-contg. 68527-27-5	-	-	837 mg/m³ [5] [6] 1067 mg/m³ [5] [7] 1286 mg/m³ [4] [7]
Isopentane 78-78-4	-	432 mg/kg bw/day [4] [6]	3000 mg/m³ [4] [6]

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
Naphtha (petroleum), full-range alkylate, butane-contg. 68527-27-5	-	-	179 mg/m³ [5] [6] 640 mg/m³ [5] [7] 1152 mg/m³ [4] [7]
Isopentane 78-78-4	214 mg/kg bw/day [4] [6]	214 mg/kg bw/day [4] [6]	643 mg/m³ [4] [6]

[4] Systemic health effects.
[5] Local health effects.
[6] Long term.
[7] Short term.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls Provide adequate ventilation. Use personal protective equipment and/or local ventilation when needed. During tank operations follow special instructions (risk of oxygen displacement and hydrocarbons).

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection	Wear protective gloves. It is recommended that gloves are made of the following material:. Nitrile rubber. Wear suitable gloves tested to EN 374. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Change protective gloves regularly.
Skin and body protection	Wear suitable protective clothing. Wear anti-static protective clothing if there is a risk of ignition from static electricity.
Respiratory protection	Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Wear a respirator fitted with the following cartridge:. Gas filter. AX. Filter must be changed often enough. Gas and combination filter cartridges must comply with EN 14387.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Clear up spills immediately and dispose of waste safely.
Environmental exposure controls	Store in a demarcated bunded area to prevent release to drains and/or watercourses.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Colour	clear Bluish when lubricant has been added
Odour	Hydrocarbons. Mild.
Odour threshold	-

Property	**Values**	**Remarks • Method**
Melting point / freezing point	-	Not applicable
Initial boiling point and boiling range	30 - 200 °C	-
Flammability	H224	-
Flammability Limit in Air		-
Upper flammability or explosive limits	7.6 %	
Lower flammability or explosive limits	1.4 %	
Flash point	-45°C ... -25°C	-
Autoignition temperature	~ 400 °C	-
Decomposition temperature	-	-
pH	No data available	Not applicable
pH (as aqueous solution)	No data available	
Kinematic viscosity	< 1 mm²/s @ 40 °C	EN ISO 3104
Dynamic viscosity	No data available	-
Water solubility	< 50 mg/L @ 20 °C	-
Solubility(ies)	-	-
Partition coefficient	≥ 4	log Kow
Vapour pressure	50 - 65 kPa @ 38 °C 84.1 kPa @ 50 °C	-
Relative density	0.68 - 0.72 @ 15 °C	-
Bulk density	-	
Liquid Density	-	
Relative vapour density	> 3	. (air = 1)
Particle characteristics		Not applicable
Particle Size	n/a	
Particle Size Distribution	n/a	

9.2. Other information

9.2.1. Information with regards to physical hazard classes

Explosive properties Not considered to be explosive
Oxidising properties Does not meet the criteria for classification as oxidising

9.2.2. Other safety characteristics
No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable under normal conditions.

Sensitivity to static discharge Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None known.

10.4. Conditions to avoid

Conditions to avoid Keep away from heat, sparks and open flame.

10.5. Incompatible materials

Incompatible materials Oxidising agent.

10.6. Hazardous decomposition products

Hazardous decomposition products None under normal use conditions.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Numerical measures of toxicity
Based on available data, the classification criteria are not met

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Naphtha (petroleum), full-range alkylate, butane-contg.	> 5000 mg/kg (Rat) (OECD 401)	> 2000 mg/kg bw (rabbit) (OECD 402)	> 5.61 mg/L (rat) (OECD 403)
Isopentane	> 2000 mg/kg (rat, OECD 401)	-	> 25.3 mg/L (rat, 4h)

	> 5000 mg/kg (rat, OECD 423)		(OECD 403)

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation May cause skin irritation.

Serious eye damage/eye irritation May cause eye and respiratory irritation. Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

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

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

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

STOT - single exposure May cause drowsiness or dizziness.

STOT - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard May be fatal if swallowed and enters airways. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties This product does not contain substances considered to have endocrine disrupting properties at levels of 0.1% or higher.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Naphtha (petroleum), full-range alkylate, butane-contg.	EL50 (96h): 3.7 mg/L NOELR (72h): 0.5 mg/L (OECD 201)	LL50 (96h): 8.2 mg/L (OECD 203, EPA 66013-75-009) EL50 (21d): 10 mg/L	-	EL50 (48h): 4.5 mg/L NOELR (48h): 0.5 mg/L (OECD 202)

		NOELR (21d): 2.6 mg/L (OECD 211)		
Isopentane	EL50 (72h): 25.1 mg/L NOELR (72h): 5.62 mg/L (Selenastrum Capricornutum, QSAR)	LL50 (96h): 34.05 mg/L NOELR (28d): 7.62 mg/L (Oncorhyncus Mykiss, QSAR)	-	EL50 (48h): 59.4 mg/L NOELR (21d): 13.3 mg/L (Daphnia Magna, QSAR)

12.2. Persistence and degradability

Persistence and degradability Inherently biodegradable. (OECD 301F, ISO/DIS 14593, CAS 68572-27-5 .

The product contains volatile substances which may spread in the atmosphere. Can be photodegraded in the atmosphere. No significant reaction in water.

Isopentane (78-78-4)

Method	Exposure time	Value	Results
OECD Test No. 301F: Ready Biodegradability: Manometric Respirometry Test (TG 301 F)			Rapidly biodegradable

12.3. Bioaccumulative potential

Bioaccumulation Possibly bioaccumulative.

12.4. Mobility in soil

Mobility in soil Volatile. Volatilization is the fastest and most dominant elimination process in surface water and soil. Product can penetrate soil until reaching the surface of ground water. The product contains substances which are bound to particulate matter and are retained in soil.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB above the threshold of declaration.

12.6. Endocrine disrupting properties

Endocrine disrupting properties This product does not contain substances considered to have endocrine disrupting properties at levels of 0.1% or higher.

12.7. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. When handling waste, the safety precautions applying to handling of the product should be considered. Do not allow into any sewer, on the ground or into any body of water.

Contaminated packaging Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Product residues retained in emptied containers can be hazardous.

SECTION 14: Transport information

IMDG

14.1 UN number or ID number	UN1203
14.2 UN proper shipping name	Gasoline
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazard	Marine pollutant
14.6 Special precautions for user	-
14.7 Maritime transport in bulk according to IMO instruments	. MARPOL Annex I cargo

RID

14.1 UN number or ID number	UN1202
14.2 UN proper shipping name	Gasoline
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazard	Yes
14.6 Special precautions for user	-

ADR

14.1 UN number or ID number	UN1203
14.2 UN proper shipping name	Gasoline
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazard	Yes
14.6 Special precautions for user	
Classification code	33
Tunnel restriction code	(D/E)

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SECTION 15: Regulatory information

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

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009
Not applicable

Other Regulations Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH).
Classification according to Regulation (EC) No. 1272/2008 [CLP].

15.2. Chemical safety assessment

Chemical Safety Report Chemical Safety Assessments have been carried out for these substances

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3
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
H411 - Toxic to aquatic life with long lasting effects

Legend
SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Issuing Date	15/02/2024
Supersedes Date	01/01/2023
Revision date	15/02/2024
Reason for revision	This is the first issue. (new SDS software has been introduced) Updated, sections: 1.4, 9.1.

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)
Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Exposure scenario
Distribution of Substance - Industrial

Identification

Product name Low Boiling Point Naphthas (Gasolines); Benzene < 0,1 %

Version number 2018

1. Title of exposure scenario

Main title Distribution of Substance - Industrial

Process scope Loading (including marine vessel/barge, rail/road car and IBC loading) and repacking (including drums and small packs) of substance, including its sampling, storage, unloading distribution and associated laboratory activities.

Sector of use SU3 Industrial uses

Environment

Environmental release category
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC5 Use at industrial site leading to inclusion into/onto article
ERC6a Use of intermediate
ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)
ERC6c Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article)
ERC6d Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)
ERC7 Use of functional fluid at industrial site

SPERC ESVOC SPERC 1.1b.v1

Worker

Process category
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4 Chemical production where opportunity for exposure arises
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC15 Use as laboratory reagent.

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

Product characteristics

Substance is complex UVCB. Predominantly hydrophobic.

Amounts used

Fraction of EU tonnage used in region: 0.1
Regional use tonnage: 18,700,000 tonnes/year
Fraction of Regional tonnage used locally: 2.0E-03
Annual site tonnage: 37,500 tonnes
Maximum daily site tonnage: 120 tonnes

Distribution of Substance - Industrial

Frequency and duration of use

Continuous release.
Emission days: 300 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Release fraction to air from process (initial release prior to RMM): 1.0E-03

Emission factor - water Release fraction to wastewater from process (initial release prior to RMM): 1.0E-05

Emission factor - soil Release fraction to soil from process (initial release prior to RMM): 1.0E-05

Environmental factors not influenced by risk management measures

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

Risk management measures

Good practice Common practices vary across sites, thus conservative process release estimates used.

Risk from environmental exposure is driven by humans via indirect exposure (primarily inhalation).

STP details Estimated substance removal from wastewater via domestic sewage treatment: 95.5%
Removal efficiency (total): 95,5%
Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 1100 tonne/day
Assumed domestic sewage treatment plant flow (m³/day):
2000.

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

Air Treat air emission to provide a typical removal efficiency of 90%.

Water Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of (%): ≥ 12. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required.

Soil Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Conditions and measures related to external treatment of waste for disposal

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

Conditions and measures related to external recovery of waste

Recovery method External recovery and recycling of waste should comply with applicable local and/or national regulations.

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

Product characteristics

Physical state Liquid

Vapour pressure Vapour pressure > 10 kPa at STP.

Concentration details Covers percentage substance in the product up to 100% (unless stated differently).

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Distribution of Substance - Industrial

Setting Assumes a good basic standard of occupational hygiene is implemented.

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures General measures (skin irritants) Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Risk management measures

General exposures (closed systems)
No other specific measures identified.
.
General exposures (closed systems)
With sample collection
No other specific measures identified.
.
General exposures (open systems)
Provide extract ventilation to points where emissions occur.
.
Process sampling
No other specific measures identified.
.
Laboratory activities
Handle in a fume cupboard or under extract ventilation.
.
Bulk closed loading and unloading
No other specific measures identified.
.
Drum and small package filling
Fill containers/cans at dedicated fill points supplied with local extract ventilation.
.
Equipment cleaning and maintenance
No other specific measures identified.
.
Storage
No other specific measures identified.

3. Exposure estimation (Environment 1)

Assessment method Used Petrorisk model. (Hydrocarbon Block Method)

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

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. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Distribution of Substance - Industrial

Assessment method	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated Qualitative approach used to conclude safe use.

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

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.

Exposure scenario
Formulation & (Re)packing of Substances and Mixtures - Industrial

Identification

Product name Low Boiling Point Naphthas (Gasolines); Benzene < 0,1 %

Version number 2018

1. Title of exposure scenario

Main title Formulation & (Re)packing of Substances and Mixtures - Industrial

Process scope Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tabletting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.

Sector of use SU3 Industrial uses

Environment

Environmental release category ERC2 Formulation into mixture

SPERC ESVOC SPERC 2.2.v1

Worker

Process category

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4 Chemical production where opportunity for exposure arises
PROC5 Mixing or blending in batch processes
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC14 Tabletting, compression, extrusion, pelletisation, granulation
PROC15 Use as laboratory reagent.

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

Product characteristics

Substance is complex UVCB. Predominantly hydrophobic.

Amounts used

Fraction of EU tonnage used in region: 0.1
Regional use tonnage: 16,500,000 tonnes/year
Fraction of Regional tonnage used locally: 1.8E-03
Annual site tonnage: 30,000 tonnes
Maximum daily site tonnage: 100 tonnes

Frequency and duration of use

Continuous release.
Emission days: 300 days/year

Formulation & (Re)packing of Substances and Mixtures - Industrial

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 2.5E-02
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 2.0E-03
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 1.0E-04

Environmental factors not influenced by risk management measures

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

Risk management measures

Good practice	Common practices vary across sites, thus conservative process release estimates used. Risk from environmental exposure is driven by humans via indirect exposure (primarily inhalation).
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 95.5% Removal efficiency (total): 95,5% Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 100 tonne/day Assumed domestic sewage treatment plant flow (m³/day): 2000.

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

Air	Treat air emission to provide a typical removal efficiency of 56.5%.
Water	Prevent leaks and prevent soil/water pollution caused by leaks. Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of (%): ≥ 94.7. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required.
Soil	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Conditions and measures related to external treatment of waste for disposal

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

Conditions and measures related to external recovery of waste

Recovery method	External recovery and recycling of waste should comply with applicable local and/or national regulations.

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

Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure > 10 kPa at STP.
Concentration details	Covers percentage substance in the product up to 100% (unless stated differently).

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Setting	Assumes a good basic standard of occupational hygiene is implemented.
Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Formulation & (Re)packing of Substances and Mixtures - Industrial

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures

General measures (skin irritants) Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Risk management measures

General exposures (closed systems)
No other specific measures identified.
.
General exposures (closed systems)
With sample collection
No other specific measures identified.
.
General exposures (open systems)
Provide extract ventilation to points where emissions occur.
.
Process sampling
No other specific measures identified.
.
Mixing operations
(closed systems)
Provide extract ventilation to points where emissions occur.
.
Laboratory activities
Handle in a fume cupboard or under extract ventilation.
.
Bulk transfers
Ensure material transfers are under containment or extract ventilation.
.
Transfer from/pouring from containers
Manual
Ensure material transfers are under containment or extract ventilation.
.
Drum/batch transfers
Ensure material transfers are under containment or extract ventilation.
.
Drum and small package filling
Fill containers/cans at dedicated fill points supplied with local extract ventilation.
.
Equipment cleaning and maintenance
No other specific measures identified.
.
Storage
No other specific measures identified.

3. Exposure estimation (Environment 1)

Assessment method

Used Petrorisk model. (Hydrocarbon Block Method)

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

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. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Assessment method

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

Qualitative approach used to conclude safe use.

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

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.

Exposure scenario
Use as a Fuel - Industrial

Identification

Product name	Low Boiling Point Naphthas (Gasolines); Benzene < 0,1 %
Version number	2018

1. Title of exposure scenario

Main title	Use as a Fuel - Industrial
Process scope	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.
Sector of use	SU3 Industrial uses

Environment

Environmental release category	ERC7 Use of functional fluid at industrial site
SPERC	ESVOC SPERC 7.12a.v1

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC16 Use of fuels

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

Product characteristics

Substance is complex UVCB. Predominantly hydrophobic.

Amounts used

Fraction of EU tonnage used in region: 0.1
Regional use tonnage: 1,400,000 tonnes/year
Fraction of Regional tonnage used locally: 1
Annual site tonnage: 1,400,000 tonnes
Maximum daily site tonnage: 4600 tonnes

Frequency and duration of use

Continuous release.
Emission days: 300 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from process (initial release prior to RMM): 2.5E-03
Emission factor - water	Release fraction to wastewater from process (initial release prior to RMM): 1.0E-05
Emission factor - soil	Release fraction to soil from process (initial release prior to RMM): 0

Environmental factors not influenced by risk management measures

Use as a Fuel - Industrial

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

Risk management measures

Good practice	Common practices vary across sites, thus conservative process release estimates used. Risk from environmental exposure is driven by humans via indirect exposure (primarily inhalation).
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 95.5% Removal efficiency (total): 95,5% Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 4600 tonne/day Assumed domestic sewage treatment plant flow (m^3/day): 2000.

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

Air	Treat air emission to provide a typical removal efficiency of 99.4%.
Water	Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of (%): ≥ 76.9. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required.
Soil	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	Combustion emissions limited by required exhaust emission controls. Combustion emissions considered in regional exposure assessment.

Conditions and measures related to external recovery of waste

Recovery method	This substance is consumed during use and no waste of the substance is generated.

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

Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure > 10 kPa at STP.
Concentration details	Covers percentage substance in the product up to 100% (unless stated differently).

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Setting	Assumes a good basic standard of occupational hygiene is implemented.
Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures	General measures (skin irritants) Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Risk management measures

Use as a Fuel - Industrial

General exposures (closed systems)
No specific measures identified.
.
Bulk closed unloading
No specific measures identified.
.
Drum/batch transfers
No specific measures identified.
.
Refuelling
No specific measures identified.
.
Refuelling aircraft
Ensure material transfers are under containment or extract ventilation.
.
Use as a fuel
(closed systems)
No specific measures identified.
.
Equipment maintenance
No other specific measures identified.
.
Storage
No specific measures identified.

3. Exposure estimation (Environment 1)

Assessment method

Used Petrorisk model. (Hydrocarbon Block Method)

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

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. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Assessment method

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

Qualitative approach used to conclude safe use.

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

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.

Exposure scenario
Use as a Fuel - Professional

Identification

Product name Low boiling point naphthas (gasolines); Benzene < 0.1%

Version number 2018

1. Title of exposure scenario

Main title Use as a Fuel - Professional

Process scope Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

Sector of use SU22 Professional uses

Environment

Environmental release category
ERC9a Widespread use of functional fluid (indoor)
ERC9b Widespread use of functional fluid (outdoor)

SPERC ESVOC SPERC 9.12b.v1

Worker

Process category
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC16 Use of fuels

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

Product characteristics

Substance is complex UVCB. Predominantly hydrophobic.

Amounts used

Fraction of EU tonnage used in region: 0.1
Regional use tonnage: 1,190,000 tonnes/year
Fraction of Regional tonnage used locally: 5.0E-04
Annual site tonnage: 590 tonnes
Maximum daily site tonnage: 1.6 tonnes

Frequency and duration of use

Continuous release.
Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Release fraction to air from wide dispersive use (regional only): 0.01

Emission factor - water Release fraction to wastewater from wide dispersive use: 1.0E-05

Emission factor - soil Release fraction to soil from process (initial release prior to RMM): 1.0E-05

Environmental factors not influenced by risk management measures

Use as a Fuel - Professional

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

Risk management measures

Good practice	Common practices vary across sites, thus conservative process release estimates used. Risk from environmental exposure is driven by humans via indirect exposure (primarily inhalation).
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 95.5% Removal efficiency (total): 95,5% Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 15 tonne/day Assumed domestic sewage treatment plant flow (m^3/day): 2000.

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

Water	Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of (%): ≥ 3.4. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required.
Soil	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	Combustion emissions limited by required exhaust emission controls. Combustion emissions considered in regional exposure assessment.

Conditions and measures related to external recovery of waste

Recovery method	This substance is consumed during use and no waste of the substance is generated.

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

Product characteristics

Physical state	Liquid
Vapour pressure	Vapour pressure > 10 kPa at STP.
Concentration details	Covers percentage substance in the product up to 100% (unless stated differently).

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Setting	Assumes a good basic standard of occupational hygiene is implemented.
Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures	General measures (skin irritants) Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Risk management measures

Use as a Fuel - Professional

General exposures (closed systems)
No other specific measures identified.
.
Preparation of material for application
Mixing operations
(closed systems)
No other specific measures identified.
.
Bulk closed unloading
No other specific measures identified.
.
Drum/batch transfers
No other specific measures identified.
.
Refuelling
No other specific measures identified.
.
Use as a fuel
(closed systems)
No other specific measures identified.
.
Equipment cleaning and maintenance
Drain down and flush system prior to equipment break-in or maintenance.
Wear chemically-resistant gloves (tested to EN374) in combination with intensive management supervision controls.
.
Storage
No other specific measures identified.

3. Exposure estimation (Environment 1)

Assessment method

Used Petrorisk model. (Hydrocarbon Block Method)

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

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. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Assessment method

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

Qualitative approach used to conclude safe use.

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

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.

Exposure scenario
Use as a Fuel - Consumer

Identification

Product name Low Boiling Point Naphthas (Gasolines); Benzene < 0,1 %

Version number 2018

1. Title of exposure scenario

Main title Use as a Fuel - Consumer

Process scope Covers consumer uses in liquid fuels.

Product category PC13 Fuels.

Sector of use SU21 Consumer uses

Environment

Environmental release category
ERC9a Widespread use of functional fluid (indoor)
ERC9b Widespread use of functional fluid (outdoor)

SPERC ESVOC SPERC 9.12c.v1

Non-industrial

Product sub-category
PC13_1 Liquid: automotive refuelling
PC13_2 Liquid: scooter refuelling
PC13_3 Liquid: garden equipment - use
PC13_4 Liquid: Garden equipment - Refuelling

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

Product characteristics

Substance is complex UVCB. Predominantly hydrophobic.

Amounts used

Fraction of EU tonnage used in region: 0.1
Regional use tonnage: 13,900,000 tonnes/year
Fraction of Regional tonnage used locally: 5.0E-04
Annual site tonnage: 7000 tonnes
Maximum daily site tonnage: 19 tonnes

Frequency and duration of use

Continuous release.
Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Release fraction to air from wide dispersive use (regional only): 0.01

Emission factor - water Release fraction to wastewater from wide dispersive use: 1.0E-05

Emission factor - soil Release fraction to soil from wide dispersive use (regional only): 1.0E-05

Environmental factors not influenced by risk management measures

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

Risk management measures

Use as a Fuel - Consumer

Risk from environmental exposure is driven by humans via indirect exposure (primarily inhalation).

STP details

Estimated substance removal from wastewater via domestic sewage treatment: 95.5%
Maximum allowable site tonnage (Msafe): 180 tonne/day
Assumed domestic sewage treatment plant flow (m^3/day):
2000.

Conditions and measures related to external treatment of waste for disposal

Disposal method

Combustion emissions limited by required exhaust emission controls. Combustion emissions considered in regional exposure assessment.

Conditions and measures related to external recovery of waste

Recovery method

This substance is consumed during use and no waste of the substance is generated.

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

Product characteristics

Physical state

Liquid

Vapour pressure

Vapour pressure > 10 kPa at STP.

Concentration details

Covers percentage substance in the product up to 100% (unless stated differently).

Amounts used

PC13_1 Liquid: automotive refuelling
For each use event, covers use amounts up to 37.5 kg.
.
PC13_2 Liquid: scooter refuelling
For each use event, covers use amounts up to 3.75 kg.
.
PC13_3 Liquid: garden equipment - use
For each use event, covers use amounts up to 750 g.
.
PC13_4 Liquid: Garden equipment - Refuelling
For each use event, covers use amounts up to 750 g.

Frequency and duration of use

Use as a Fuel - Consumer

PC13_1 Liquid: automotive refuelling
Covers use up to 52 days/year.
Covers use up to 1 time(s)/day.
Covers exposure up to 0.05 hours per event.
.
PC13_2 Liquid: scooter refuelling
Covers use up to 52 days/year.
Covers use up to 1 time(s)/day.
Covers exposure up to 0.03 hours per event.
.
PC13_3 Liquid: garden equipment - use
Covers use up to 26 days/year.
Covers use up to 1 time(s)/day.
Covers exposure up to 2.00 hours per event.
.
PC13_4 Liquid: Garden equipment - Refuelling
Covers use up to 26 days/year.
Covers use up to 1 time(s)/day.
Covers exposure up to 0.03 hours per event.

Human factors not influenced by risk management

Potentially exposed body parts	PC13_1 Liquid: automotive refuelling . PC13_2 Liquid: scooter refuelling : Covers skin contact area up to 210.00 cm². PC13_4 Liquid: Garden equipment - Refuelling : Covers skin contact area up to 420.00 cm².

Other given operational conditions affecting Non-industrial exposure

Setting	PC13_1 Liquid: automotive refuelling . PC13_2 Liquid: scooter refuelling . PC13_3 Liquid: garden equipment - use : Covers outdoor use. . PC13_4 Liquid: Garden equipment - Refuelling : Covers use in a one car garage (34 m³) under typical ventilation.
Temperature	Assumes activities are at ambient temperature (unless stated differently).
Room size	PC13_1 Liquid: automotive refuelling . PC13_2 Liquid: scooter refuelling . PC13_3 Liquid: garden equipment - use : Covers use in room size of 100 m³. PC13_4 Liquid: Garden equipment - Refuelling : Covers use in room size of 34 m³.

Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

3. Exposure estimation (Environment 1)

Assessment method Used Petrorisk model. (Hydrocarbon Block Method)

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

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. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

3. Exposure estimation (Health 1)

Assessment method The ECETOC TRA tool has been used to estimate consumer exposures, unless otherwise indicated.

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

Use as a Fuel - Consumer

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.