SECTION 1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1. Product identifier

- Trade name: UNLEADED PETROL
  EUROSUPER 95, EUROSUPER 95 CLASS, EUROSUPER 95 CLASS PLUS, EUROSUPER 95 PERFORMANCE, EUROSUPER 100, EUROSUPER 100 CLASS, EUROSUPER 100 CLASS PLUS, EUROSUPER 100 PERFORMANCE, EUROSUPER 95 E5, EUROSUPER 95 E5 CLASS PLUS, EUROSUPER 95 E5 PERFORMANCE, EUROSUPER 100 E5, EUROSUPER 100 E5 CLASS PLUS, NON OXY GASOLINE
- Chemical name: -
- Index no.: -
- EC no.: -
- CAS no.: -
- Registration no.: -
- UFI: -
- Form: -
- Product code: 1000298, 1000512, 1002212, 1002498, 1002191, 1002325, 1002213, 1002706, 1002279, 1002297, 1002700, 1002703, 1002704, 1002592

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

- Relevant identified uses: **Industrial:** Manufacture of Substance, Use as a fuel
  Professional: Use as a fuel
  Consumer: Use as a fuel
- Uses advised against: The uses that are in the list above are relevant. Other uses are not recommended unless an assessment that proves that the related risks are controlled has been conducted before starting that use.

1.3. Details of the supplier of the safety data sheet

- Manufacturer/supplier: INA-Industrija nafte, d.d.

Address: Av. V. Holjevca 10
pp 555, 10002 Zagreb, HRVATSKA

Phone: 00-385-1-6450-842 / 00-385-1-6451-075 (24 h)

Fax: 00-385-1-6452-050

SD & HSE **Phone:** 00-385-1-6450-803

- email address of a competent person responsible for the safety data sheet: sds@ina.hr

1.4. Emergency Telephone Number

- Emergency Service Telephone Number: **112**

Ministry of the Interior	00-385-1-6192-929
Directorate for civil protection	00-385-1-4551-792
Operative centre for civil protection	00-385-1-4814-911
e-mail: occz@civilna-zastita.hr	

- Medical Information Telephone Number: **00-385-1-23-48-342**

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

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

Flam. Liq. 1; H224

Skin Irrit. 2; H315

Asp. Tox. 1; H304

Repr. 2; H361d

Muta. 1B; H340

Carc. 1B; H350

STOT 3; H336

Aquatic Chronic 2; H411

Full text of H-phrases: see section 16.

2.2. Label elements

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

Hazard pictograms:

GHS02 GHS07 GHS08 GHS09

Signal word: **Danger**

Hazard statements (H):	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 (P):	P201	Obtain special instructions before use.
	P210	Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
	P273	Avoid release to the environment.
	P301+ P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P331	Do NOT induce vomiting.
	P403+ P233	Store in a well-ventilated place. Keep container tightly closed.

2.3. Other hazards

Vapours form flammable mixtures with air and explosive. Vapours are heavier than air: they can accumulate in confined spaces or in depressions, are spread at the soil and can pose risks of fire and explosion at a distance. In some circumstances, the product can accumulate static electricity in significant amounts, with the risk of shocks that may cause fire or explosions. The product does not meet the criteria for PBT or vPvB classification in Annex XIII of REACH.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

-Substance:			Mixture:	X	

- Components contributing to product hazardousness:

Substance name	Substance identification			[%]	Classification according to Regulation (EC) No 1272/2008 (CLP)
	CAS no.	EC no.	Registration no. (REACH)		
Gasoline	86290-81-5	289-220-8	01-2119471335-39-0091	≤ 100	Carc. 1B; H350 Muta. 1B; H340 Asp. Tox. 1; H304
MTBE (Tert-butyl-methyl-ether)	1634-04-4	216-653-1	01-2119452786-27-xxxx	≤ 15	Flam. Liq. 2; H225 Skin Irrit. 2; H 315

ethanol	64-17-5	200-578-6	01-2119457610-43-xxxx	≤ 10	Flam. Liq. 2; H225
methanol	67-56-1	200-659-6	-	< 3%	Flam. Liq. 2; H225 Acute Tox 3*; H301 Acute Tox 3*; H311 Acute Tox 3*; H331 STOT SE 1; H370
Benzene [(1)]	71-43-2	200-753-7	-	≤ 1	Flam. Liq. 2; H225 Carc. 1A; H350 Muta. 1B; H340 STOT RE 1; H372 Asp. Tox. 1; H304 Eye Irrit. 2; H319 Skin Irrit. 2; H315
Toluene [(1)]	108-88-3	203-625-9	-	> 1	Flam. Liq. 2 H225 Repr. 2; H361d Asp. Tox. 1; H304 STOT RE 2 *H373 Skin Irrit. 2; H315 STOT SE 3; H336
n-hexane [(1)]	110-54-3	203-777-6	-	> 0,1	Flam. Liq. 2; H225 Repr. 2; H361f Asp. Tox. 1; H304 STOT RE 2 *; H373 Skin Irrit. 2; H315 STOT SE 3; H336 Aquatic Chronic 2; H411
[(1)] These components were not added on purpose, but they are reported as important for classification					

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

- general information: In case of ingestion, always assume aspiration into the lungs has occurred, accompanied by the pulmonary oedema hazard. Show the label on the packaging or the SDS.

- after inhalation:	Remove the person from dangerous area to fresh air. In case of headache, dizziness, nausea and permanent complaints immediately seek medical attention. In case of fainting transport in lateral position to hospital, paying attention to the free passing of the air thorough the respiratory tract. In case of difficulty in breathing or respiratory arrest, open airways, initiate resuscitation (heart massage and artificial respiration) and immediately seek medical attention.
- after skin contact:	Take off the contaminated clothes and footwear. Thoroughly rinse the afflicted skin surface with water and soap for 10 - 15 minutes. In case of irritation, swelling or redness, immediately seek medical advice.
- after eye contact:	Remove contact lenses (if present) and flush the eyes with running water for at least 15 minutes. In case of irritation, blurred vision and swelling immediately seek medical attention.
- after ingestion:	DO NOT induce vomiting! Do not give anything by mouth! Always assume aspiration into the lungs has occurred. If vomiting occurs, keep the head below the level of hips in order to prevent penetration into the lungs. Immediately seek medical attention.
- personal protective equipment for first aid responder:	No data available.

4.2 Most important symptoms and effects, both acute and delayed

- after inhalation:	May cause drowsiness or dizziness.
- after skin contact:	Redness, dermatitis.
- after eye contact:	May cause slight eye irritation.
- after ingestion:	It can cause nausea or headache. May cause lung damage if swallowed. Danger of pulmonary oedema due to aspiration in the lungs.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Only qualified medical personnel should administer oxygen.

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

- SUITABLE:	Heavy air foam (foam resistant to alcohols and polar solvents), dry powder, CO_2, water mist. When using dry powder and CO_2 (for initial fires, minor fires, and indoor fires) attention is to be paid to the hazard of possible repeated flaring up of the fire after extinguishing.

- UNSUITABLE: Water jet (danger of fire spread).

5.2 Special hazards arising from the substance or mixture:

- Hazardous combustion products:	Incomplete combustion of hydrocarbons can produce smoke containing CO, CO_2.
- Hydrocarbon vapours:	Very flammable substance (mixture). Danger from explosion. Vapours, being heavier than air, stay close to the ground and in recesses. Release in sewage system increases danger from explosion.

5.3 Advice for firefighters

- Firefighting measures for special hazards:	Remove all ignition sources and, if necessary, call firemen. Special care should be taken of the fact that there is a permanent danger of creation of explosive mixture with the air at room temperature.
- Special firefighting methods:	Use water mist and water spray for cooling the surfaces exposed to heat and for protection of people. Only those who are trained in fire protection may use water spray (dispersed water).
- Special protective equipment for firefighters:	Self-sustained open-circuit compressed-air breathing apparatus (HRN EN 137). Wear protective clothing for firefighters (intervention suit) in accordance with HRN EN 469.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment:	Use personal protective equipment listed in Section 8 and remove unprotected persons from the affected area immediately.
- Accident prevention procedures:	Rooms at risk must be thoroughly vented. Exhibit a sign of prohibited entry and work with open flame and sparking devices on a visible location. Measure the concentration of gasoline vapours in the air, in line with regulations. Take measures against static electricity occurrence. Provide electrical conductivity by connecting and grounding of all equipment. Control area by flammable gases detector. Do not use electric equipment. Do not inhale vapours, evaporation. Do not smoke.

- Procedure in case of accident:	Stand upwind from the spill site. Prevent product spread, if possible, in a safety manner. Define the risk area and prevent discharging and spilling into watercourses, canals, drainage systems and soil by digging out a protective ditch, fencing it with bags filled with dry sand, earth or clay. Provide good ventilation of the area. In case of major leaks, call 112.
6.1.2. For emergency responders:	Insulate the discharge area. Use personal protective equipment listed in Section 8 and remove unprotected persons from the affected area immediately.
6.2 Environmental precautions:	Prevent discharging and spilling of the product, if possible, in a safely manner. Insulate the discharge area. Define the risk area and prevent discharging and spilling into watercourses, canals, drainage systems and soil by digging out a protective ditch, fencing it with bags filled with dry sand, earth or clay.

6.3 Methods and material for containment and cleaning up

6.3.1. For bunding, covering and capping:	Dig a protective ditch around the discharge area, fence it off with bags filled with dry sand, earth or clay.
6.3.2. For cleaning up:	Use safety-type pump for reloading from the damaged tank into an empty tank / tank truck / tank car. Remove remainder from the ground using adsorption agents (sawdust, mineral adsorbents, and other inert materials). Place the waste material and removed contaminated surface soil level into well-closed tanks to be stored in well-vented rooms until disposal to be done by legal entities for disposal of hazardous waste, authorized by the Ministry in charge of environmental protection. In case of gasoline spill in working area, the fluid must be removed, and the surface washed with soapy water and then rinsed with clean water.
6.3.3. Other information:	Very flammable liquid and vapour! In case of traffic accident, properly ground the tank truck, mark the accident area and call the responsible person and the expert service in charge of taking care of the consequences of the accident.
6.4 Reference to other sections:	See sections 8 and 13.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

7.1.1 Safe handling advice: Keep far from heat sources and eliminate immediately all ignition sources. Re-loading i.e., unloading/loading shall be performed at the sites designed for the purpose, ensuring the air ventilation/outlet. Use the equipment and devices in good working order. Do not use sparking tools. Work room/area and storage area shall be provided with impermeable floor, resistant to solvents. Floors in rooms endangered by explosive atmosphere shall have transitional resistance of <1 MΩ within the system for bypassing the static electricity.

Equipment shall be grounded, and appropriate protective measures shall be taken against static electricity: grounding, air ionization, use of antistatic material, maintaining air humidity above 65%, bypassing the static electricity through electric influence.

7.1.2 Advice on general occupational hygiene: Prohibited smoking, eating, drinking during the work, as well as keeping food in areas where the product is handled. Personal clothes shall be kept separately from the work clothes and workplace. Obligatory wearing of the prescribed work clothes, rubber boots, protective gloves and goggles. Extremely dirty, soaked or torn clothes must be immediately changed. Strictly avoid contact with skin and eyes.

7.2 Conditions for safe storage, including any incompatibilities

- SUITABLE: Store in well-sealed tanks, properly manufactured and equipped. Provide room/area ventilation and appropriate temperature. Take measures against the static electricity charge. Make sure that receiving tank farms are below self-supporting tanks.
- TO BE AVOIDED: Storage in the same room/area with other chemicals, particularly those that may cause fire. Use of sparking tools or devices/equipment that may produce sparks in storage area.

- Packaging materials

- RECOMMENDED: Original as made by the tank/container manufacturer with valid certification.
- NOT SUITABLE: Any other.

7.3 Specific end use(s):

No data available.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Hazardous substance (CAS No.)	Occupational exposure limit values/short term values (OEL/STEL)		Biological limit values
	ppm	mg/m³	
Gasoline, low boiling point gasoline - unspecified (86290-81-5)	300/500	-/-	No data.
benzene (71-43-2)	1/-	3,25/-	28 µg /L (0,36 µmol/L) – blood immediately at the end of work shift 46 µg/g creatinine* (21,7 µmol/mol creatinine*) – urine at the end of work shift
n-hexane (110-54-3)	20	72	150 µg/L (1,74 µmol/L) – blood during exposure 1,66 µmol/L (40 ppm) – in extremely exhaled air during exposure
toluen (108-88-3)	50/100	192/384	1,0 mg/L (10,85 µmol/L) – blood immediately at the end of work shift 0,83 µmol/L (20 ppm) – in extremely exhaled air during exposure
MTBE (Tert-butyl-methyl-ether) (1634-04-4)	50/100	183,5/367	No data.
ethanol (64-17-5)	1000/-	1900/-	No data.
methanol (67-56-1)	200/-	260/-	7,0 mg/g creatinine* (24,7 mmol/mol creatinine*) – urine at the end of work shift

- Monitoring procedures:

8.2. Exposure controls

- Summary of risk management measures: Measurement of benzene vapours concentration in the air, in line with regulations.

8.2.1 Occupational exposure controls

- Description of operating procedure and technological control:

Make sure work areas are well-ventilated. Provide a decontamination sprayer for the eyes and face. Adopt personal hygiene measures: wash the hands after contact with the fuel, especially before eating, drinking and/or smoking. Regularly maintain and wash the clothing and equipment after use to remove dirt. Properly dispose of the contaminated clothing and equipment. Maintain cleanliness in accordance with good practice. Educate the employees on the hazards and control measures. Test and maintain the equipment used when handling the fuel: for example, personal protective equipment, ventilation system. Do not swallow. If swallowed, seek medical attention.

8.2.2 Personal protective equipment

- respiratory protection:	In concentrations exceeding 300 ppm obligatory wearing of protective masks for the whole face (HRN EN 136) with filter 'A' (HRN EN 14387). In concentrations exceeding 3000 ppm obligatory use of self - sustained open-circuit compressed - air breathing apparatus (HRN EN 137).
- hand protection:	Protective gloves of resistant and impermeable material. At full contact gloves of nitrile rubber 0,40 mm thick, at contact with drops gloves of nitrile rubber 0,11 mm thick (HRN EN 374). At shorter contact (4 h) PVA gloves may be used (polyvinyl alcohol).
- eye/face protection:	Protective goggles or guard (HRN EN 166) at lower concentrations, protective shields at higher concentrations.
- skin and body protection:	Use chemical resistant gloves, clothing, and apron (where there is a risk of splashing).
- Special hygienic and safety precautions:	Maintaining regular stipulated hygiene for work with hazardous substances. Take off the contaminated clothes and footwear. Equipment and devices shall be regularly inspected and maintained with running water. When handling this product, smoking, eating, and drinking are prohibited. After each interruption of work, washing of hands is obligatory.

8.2.3 Environmental exposure controls

- Summary of risk management measures: No data available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

- physical state:	liquid	
- colour:	colourless	
- odour:	characteristic of gasoline	
- odour threshold:	No data available.	
- pH value (indicate conc. and temp.):		Not applicable.
- melting point/freezing point:	°C	No data available.
- boiling point/boiling range:	°C	20 – 210
- flash point:	°C	<0 (from literature)
- evaporation rate:		No data available.
- flammability (solid, gas):		Need to be heated to ignite.
- explosive limits:	vol. %	0,6 - 8 (from literature)
- vapour pressure:	kPa	45 – 60 (summer) 60 – 90 (winter)
- vapour density at 15°C:	kg/m^3	No data available.
- relative density:		No data available.
- density at 15°C:	kg/m^3	720 – 775
- solubility (indicate solvent):	g/L	No data available.
- solubility in water:	g/L	Insoluble.
- partition coefficient n-octanol / water	logPow	Not applicable.
- auto ignition temperature:	°C	280 - 470 (from literature)
- decomposition temperature:	°C	No data available.
- kinematic viscosity at 40 °C:	mm^2/s	No data available.
- oxidizing properties:		Not applicable.
- conductivity:	pS/m	No data available.

(1) Allowed vapour pressure deviation for motor gasoline containing bioethanol up to 5% v/v is 8,0 kPa.

9.2. Other information: No data available.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity:	Stable when the prescribed storage and use requirements are met.
10.2 Chemical stability:	Stable when the prescribed storage and use requirements are met.
10.3 Possibility of hazardous reactions:	No potentially hazardous reactions known.
10.4 Conditions to avoid:	Keep away from heat, open flame, sparks.
10.5 Incompatible materials:	Halogens, strong acids, bases, and strong oxidants.
10.6 Hazardous decomposition products:	None in standard operating conditions and in proper storage; however thermal decomposition may generate harmful gases: carbon oxides (including carbon-monoxide, CO).

SECTION 11. TOXICOLOGICAL INFORMATION

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

- Acute toxicity

- oral (LD_{50}):	> 5000 mg/kg $_{\text{body weight}}$ (rat)
- inhalation (LC_{50}):	> 5610 mg/m^3 air (analytically) (rat)
- dermal (LD_{50}):	> 2000 mg/kg $_{\text{body weight}}$ (rabbit)

- Corrosion/Irritation

- skin:	Redness, dermatitis (H315).

- Serious damage/irritation

- eyes:	No data available.

- Sensitisation

- skin:	No data available.
- respiratory tract:	No data available.
- Germ cell mutagenicity:	May cause genetic defects (H340).
- Carcinogenicity:	May cause cancer (H350).
- Reproductive toxicity:	Suspected of damaging the unborn child (H361d).
- STOT (SE):	May cause drowsiness or dizziness (H336).
- STOT (RE):	No data available.
- Aspiration hazard:	May be fatal if swallowed and enters airways (H304).
- Information on likely routes of exposure:	No data available.

- Symptoms related to the physical, chemical and toxicological characteristics:	Prolonged inhalation of vapours causes a feeling of intoxication, headache, urge to vomit, fainting.
- Delayed and immediate effects as well as chronic effects from short and long-term exposure:	No data available.

11.2. Information on other hazards

- Endocrine disrupting properties:	No data available.
- Other information:	No data available.

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity

- to aquatic organisms:	EL_{50}=4,5 mg/l (Daphnia magna), EL_{50}=3,1 mg/l (algae), LL_{50}=8,2 mg/l (fish)
- to ground organisms:	No data available.
- to plants and land animals:	No data available.

12.2. Persistence and degradability

- biodegradation:	Not easily biodegradable.
- other degradation processes:	No data available.
- degradation in wastewater:	Insoluble in water. Forms surface film that quickly evaporates, but if large quantities are spilled, may have harmful effect on aquatic organisms due to lack of oxygen.

12.3. Bioaccumulative potential

- bio-concentration factor (BCF):	No data available.

12.4. Mobility in soil

Method: No data available.

- Known or predicted distribution in environmental compartments:	No data available.
- surface tension:	No data available.
- absorption/desorption:	No data available.
- other physical and chemical properties:	See section 9.

12.5. Results of PBT and vPvB assessment

- data from chemical safety report:	Product does not fulfil PBT and vPvB criteria for classification defined by Annex XIII of REACH Regulation.

12.6. Endocrine disrupting properties: No data available.

12.7. Other adverse effects: No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods: Waste shall be handed over to the person authorised for waste collection, disposal or recovery. If possible, the waste shall be recovered.

- Waste codes: 13 07 02*

- Waste from residues: There is no classic waste from this product except in case of unintentional release. For such cases see Section 6.

- Contaminated packaging: Not applicable.

- Relevant provisions: Act on waste management, Ordinance on Waste Catalogue, Ordinance on waste management.

SECTION 14. TRANSPORT INFORMATION

14.1 UN number or ID number: 1203

14.2 UN proper shipping name: GASOLINE or PETROL

14.3 Transport hazard class(es)

ADR/RID/ADN/ICAO/IATA: 3

IMDG: 3

14.4 Packing group

ADR/RID/ADN/IMDG/ICAO/IATA: II

14.5 Environmental hazards

ADR, RID, ADN, ICAO/IATA: Toxic to aquatic life with long lasting effects.

IMDG: Maritime pollutant

14.6 Special precautions for user

ADR

Transport category: 2

Vehicle for tank carriage: FL

Tank code: LGBF

Tunnel restriction code: (D/E)

Label:3

Classification code: F1

RID

Transport category: 2

Tank code: LGBF

Label: 3

Classification code: F1

Hazard identification: 33

Special provisions: 243, 534, TU9.

Hazard identification: 33

Special provisions: 243, 534, 664, TU9, S2, S20.

ADN

Label: 3

Additional requirements/Remarks: 14

Dangers: 3+N2+CMR+F

Equipment required: PP, EP, EX, TOX, A.

Classification code: F1

Carriage permitted: T

Type of tank vessel: N/2

Anti-explosion protection required: yes

Maximum degree of filling in %: 97

IMDG

Subsidiary risk: maritime pollutant

Group of the cargo: E

Special provisions: 243, 363, TP1.

EmS: F-E, S-E

Segregation group: E

ICAO

Label: 3

Cargo IMP code: 3H

Passenger and cargo aircraft: yes

Cargo aircraft only: 60L

ERG code: E2

14.7 Maritime transport in bulk according to IMO instruments

Trade name:	Not applicable.
Pollution category (according to MARPOL, Annex II):	Not applicable.
Vessel type (according to IBC Code):	Not applicable.
Special and operative requirements (according to IBC Code):	Not applicable.

15. REGULATORY INFORMATION

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

- Applicable EU regulations: Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Regulation (EC) No 1272/2008 European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (CLP), Commission Regulation (EU) 2020/878 of 18

June 2020 amending Annex II to Regulation (EC) No 1907/2006 (REACH)

- Applicable national regulations: Chemicals Act; Ordinance on workers protection to dangerous chemicals exposure during work, exposure limit values and biological limit values; Act on Waste Management, Ordinance on Waste Catalogue, Ordinance on waste management.

- Authorization information: -

- Restriction information: -

15.2 Chemical Safety Assessment

- Chemical Safety Assessment carried out (CSA): YES **X** NO

16. OTHER INFORMATION

Revision indicators

Section:	Subject of change:
1	Product names and product codes updated.

Full text of H- phrases

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.

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS number	Chemical Abstract Service number
CLP	Classification, Labelling and Packaging of substances and mixtures
CSA	Chemical Safety Assessment

CSR	Chemical Safety Report
EC number	European Community number for identification of chemical substances commercially available in the EU
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code transport
LC50	Lethal concentration for 50% of tested organisms
LD50	Lethal concentration for 50% of tested organisms (medium lethal concentration)
OIN	Oil industry notes
PBT	Persistent, bioaccumulative and toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations Concerning the International Transport of Dangerous Goods by Rail
STOT (SE)	Specific Target Organ Toxicity (Single Exposure)
STOT (RE)	Specific Target Organ Toxicity (Repeated Exposure)
UFI	Unique formula identifier (according to section 5. Part A of Annex VIII of Regulation (EU) no. 1272/2008)
UVCB	Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials
vPvB	Very persistent and very bioaccumulative

Statement:

This SDS is in compliance with the EU Regulation No. 1907/2006 and No. 1272/2008 of the European Parliament and the Council. It contains important user health and safety and environmental protection information. The information provided herein is not a substitute for any specification of quality and should not be deemed as a guarantee of the adequacy and applicability of this product for any purpose whatsoever. All information provided herein is based on our current knowledge and compliant with applicable legal regulations. The user is responsible for adherence to relevant legal regulations.

Data source:

1. www.hzt.hr
2. http://echa.europa.eu/hr
3. Handbook – Identified Uses of Petroleum Substances 2021 Dossier Update, Concawe, September 2021
4. Hazard Classification and Labelling of Petroleum Substances in the EEA - 2020, Concawe
5. First Aid Reference Guide – 2021 update

APPENDIX: EXPOSURE SCENARIOS ACCORDING TO CHEMICAL SAFETY REPORT

APPENDIX: Exposure Scenario

Table Identified Use Description and Exposure Scenario Number Key

Category	Identified use name	Sector	ES Number	Sector of Use (SU)	Product Category (PC)	Process Category (PROC)	Environmental Release Category (ERC)	Specific Environmental Release Category (SpERC)
Low boiling point naphtha (Gasoline)	01 – Manufacture of Substances (classified as H340 and/or H350 and/or H361;(containing 0% to 1% benzene)	Industrial	ES 9.1.1b	3, 8, 9	NA	1, 2, 3, 8a, 8b, 15	1	ESVOC SpERC 1.1.v1
Low boiling point naphtha (Gasoline)	12a – Use as a fuel: Industrial (classified as H340 and/ or H350 and/or H361; (containing 0% to 1% benzene))	Industrial	ES 9.10.1b	3	NA	1, 2, 3, 8a, 8b, 16	7	ESVOC SpERC 7.12a.v1
Low boiling point naphtha (Gasoline)	12b – Use as a fuel: Professional (classified as H340 and/ or H350 and/or H361;(containing 0% to 1% benzene))	Professional	ES 9.11.1b	22	NA	1, 2, 3, 8a, 8b, 16	9a, 9b	ESVOC SpERC 9.12b.v1
Low boiling point naphtha (Gasoline)	12c – Use as a fuel: Consumer (classified as H340 and/or H350 and/or H361; (containing 0% to 1% benzene))	Consumer	ES 9.12.1b	21	13	NA	9a, 9b	ESVOC SpERC 9.12c.v1

1. MANUFACTURE OF UNLEADED PETROL - INDUSTRIAL

Section 1 Exposure Scenario Title Low boiling point naphthas (Gasoline) that is classified as H350 and/or H340 and/or H361; (containing 0% to 1% benzene)	
Title	
Manufacture of substances	
Use Descriptor	
Sector(s) of Use	3, 8, 9
Process Categories	1, 2, 3, 8a, 8b, 15 Further information on the mapping and allocation of PROC codes is contained in Table 9.1
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 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 > 10 kPa at STP OC5
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently) G13
Amount used	Not applicable
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) G2
Human factors not influenced by risk management	Not applicable
Other Operational Conditions affecting exposure	Operation is carried out at elevated temperature (> 20°C above ambient temperature). OC7. Assumes a good basic standard of occupational hygiene is implemented G1.
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions**
General Measures (skin irritants). G19.	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 skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin effects that may develop. E3
General Measures (carcinogens). G18.	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 systems and clear transfer lines prior to breaking containment. Clean / flush equipment, where possible, prior to maintenance.

General Measures (carcinogens). G18.	Where there is potential for exposure: Restrict access to authorised staff; provide specific activity training to operators to minimise exposures; wear suitable gloves (tested to EN374) and coveralls to prevent skin contamination; wear respiratory protection when its use is identified for certain contributing scenarios; clear up spills immediately and dispose of wastes safely. Regularly inspect, test and maintain all control measures. Consider the need for risk-based health surveillance. G20.
CS15 General exposures (closed systems). + CS56 With sample collection.	Handle substance within closed systems. E47. Sample via a closed loop or other system intended to avoid exposure. E8. Wear suitable gloves tested to EN374. PPE15.
CS15 General exposures (closed systems). + CS54 Continuous process.	Handle substance within a closed system. E47.
CS15 General exposures (closed systems). + CS55 Batch process.	Handle substance within a closed system. E47. Ensure operation is undertaken outdoors. E69.
CS36 Laboratory activities	Handle within a fume cupboard or implement suitable equivalent methods to minimise exposure. E12.
CS14 Bulk transfers	Ensure material transfers are under containment or extract ventilation. E66.
CS39 Equipment cleaning and maintenance	Drain down and flush system prior to equipment break-in or maintenance. E55. Retain drain downs in sealed storage pending disposal or for subsequent recycle. ENVT4. Clear spills immediately. C&H13. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. PPE16.
and maintenance	E55. Retain drain downs in sealed storage pending disposal or for subsequent recycle. ENVT4. Clear spills immediately. C&H13. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. PPE16.
CS67 Storage.	Store substance within a closed system. E84
Additional information on the basis for the allocation of the identified OCs and RMMs is contained in Appendices 1 to 3	

Section 2.2 Control of environmental exposure

Product characteristics	
Substance is complex UVCB [PrC3]. Predominantly hydrophobic [PrC4a].	
Amounts used	
Fraction of EU tonnage used in region	0.1
Regional use tonnage (tonnes/year)	5.12E2
Fraction of Regional tonnage used locally	0.2
Annual site tonnage (tonnes/year)	1.0E2
Maximum daily site tonnage (kg/day)	5.0E3
Frequency and duration of use	
Continuous release [FD2].	
Emission days (days/year)	20

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)	1.0
Release fraction to wastewater from process (initial release prior to RMM)	0.00003
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 [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Prevent discharge of undissolved substance to or recover from wastewater [TCR14]. Risk from environmental exposure is driven by humans via indirect exposure (primarily inhalation) [TCR1k]. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required [TCR9].	
Treat air emission to provide a typical removal efficiency of (%)	70
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency (%)	4.4
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of (%)	0
Organisation measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils [OMS2]. Sludge should be incinerated, contained or reclaimed [OMS3].	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	95.5
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	95.5
Maximum allowable site tonnage (M_{Safe}) (kg/d)	2.9E4
Assumed domestic sewage treatment plant flow (m^3/d)	2000
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 [ETW3].	
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable local and/or national regulations [ERW1].	
Additional information on the basis for the allocation of the identified OCs and RMMs is contained in Petrorisk file	
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. G21.	
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model [EE2].	
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. G22.

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. G23.

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. G32. Available hazard data do not support the need for a DNEL to be established for other health effects. G36. Risk Management Measures are based on qualitative risk characterisation. G37.

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 [DSU1].
Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

2. USE OF UNLEADED PETROL AS A FUEL – INDUSTRIAL

Section 1 Exposure Scenario Title Low boiling point naphthas (Gasoline) that is classified as H340 and/or H350 and/or H361;(containing 0% to 1% benzene)	
Title	
Use as a fuel	
Use Descriptor	
Sector(s) of Use	3
Process Categories	1, 2, 3, 8a, 8b, 16 Further information on the mapping and allocation of PROC codes is contained in Table 9.1
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 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 > 10 kPa at STP OC5
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently) G13
Amounts used	Not applicable
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) G2
Human factors not influenced by risk management	Not applicable
Other Operational Conditions affecting exposure	Assumes use at not more than 20°C above ambient temperature, unless stated differently. G15. Assumes a good basic standard of occupational hygiene is implemented G1.
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions**
General Measures (skin irritants). G19.	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 skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin effects that may develop. E3

General Measures (carcinogens). G18.	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 systems and clear transfer lines prior to breaking containment. Clean / flush equipment, where possible, prior to maintenance. Where there is potential for exposure: Restrict access to authorised staff; provide specific activity training to operators to minimise exposures; wear suitable gloves (tested to EN374) and coveralls to prevent skin contamination; wear respiratory protection when its use is identified for certain contributing scenarios; clear up spills immediately and dispose of wastes safely. Regularly inspect, test and maintain all control measures. Consider the need for risk based health surveillance. G20.
CS502 Bulk closed unloading	Ensure material transfers are under containment or extract ventilation. E66.
CS8 Drum/batch transfers	Ensure material transfers are under containment or extract ventilation. E66.
CS507 Refuelling	Ensure material transfers are under containment or extract ventilation. E66.
CS508 Refuelling aircraft	Ensure material transfers are under containment or extract ventilation. E66.
CS15 General exposures (closed systems)	Handle substance within a closed system. E47. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. E1.
GEST_12I Use as a fuel, CS107 (closed systems)	Handle substance within closed systems. E47.
CS39 Equipment cleaning and maintenance.	Drain down system prior to equipment break-in or maintenance. E65. Retain drain downs in sealed storage pending disposal or for subsequent recycle. ENVT4. Clear spills immediately. C&H13. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. E1. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. PPE16.
CS67 Storage	Store substance within a closed system. E84. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. E1.
Additional information on the basis for the allocation of the identified OCs and RMMs is contained in Appendices 1 to 3	
Section 2.2 Control of environmental exposure	
Product characteristics	
Substance is complex UVCB [PrC3]. Predominantly hydrophobic [PrC4a].	
Amounts used	
Fraction of EU tonnage used in region	0.1
Regional use tonnage (tonnes/year)	1.4E6
Fraction of Regional tonnage used locally	1

Annual site tonnage (tonnes/year)	1.4E6
Maximum daily site tonnage (kg/day)	4.6E6
Frequency and duration of use	
Continuous release [FD2].	
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)	0.0025
Release fraction to wastewater from process (initial release prior to RMM)	0.00001
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 [TCS1].	
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]. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required [TCR9].	
Treat air emission to provide a typical removal efficiency of (%)	99.4
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency (%)	76.9
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of (%)	0
Organisation measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils [OMS2]. Sludge should be incinerated, contained or reclaimed [OMS3].	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	95.5
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	95.5
Maximum allowable site tonnage (M_{Safe}) (kg/d)	4.6E6
Assumed domestic sewage treatment plant flow (m^3/d)	2000
Conditions and measures related to external treatment of waste for disposal	
Combustion emissions limited by required exhaust emission controls [ETW1]. Combustion emissions considered in regional exposure assessment [ETW2].	
Conditions and measures related to external recovery of waste	
This substance is consumed during use and no waste of the substance is generated [ERW3].	
Additional information on the basis for the allocation of the indentified OCs and RMMs is contained in Petrorisk file	

Section 3 Exposure Estimation
3.1. Health
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
G21.
3.2. Environment
The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model [EE2].
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. G22. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. G23. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. G32. Available hazard data do not support the need for a DNEL to be established for other health effects. G36. Risk Management Measures are based on qualitative risk characterisation. G37.
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 [DSU1]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

3. USE OF UNLEADED PETROL AS A FUEL – PROFESSIONAL

Section 1 Exposure Scenario Title Low boiling point naphthas (Gasoline) that is classified as H340 and/or H350 and/or H361;(containing 0% to 1% benzene)	
Title	
Use as a fuel	
Use Descriptor	
Sector(s) of Use	22
Process Categories	1, 2, 3, 8a, 8b, 16 Further information on the mapping and allocation of PROC codes is contained in Table 9.1
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 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 > 10 kPa at STP OC5
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently) G13
Amounts used	Not applicable
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) G2
Human factors not influenced by risk management	Not applicable
Other Operational Conditions affecting exposure	Assumes use at not more than 20°C above ambient temperature, unless stated differently. G15. Assumes a good basic standard of occupational hygiene is implemented G1.
Contributing Scenarios	**Specific Risk Management Measures and Operating Conditions**
General Measures (skin irritants). G19.	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 skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin effects that may develop. E3

General Measures (carcinogens). G18.	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 systems and clear transfer lines prior to breaking containment. Clean / flush equipment, where possible, prior to maintenance. Where there is potential for exposure: Restrict access to authorised staff; provide specific activity training to operators to minimise exposures; wear suitable gloves (tested to EN374) and coveralls to prevent skin contamination; wear respiratory protection when its use is identified for certain contributing scenarios; clear up spills immediately and dispose of wastes safely. Regularly inspect, test and maintain all control measures. Consider the need for risk based health surveillance. G20.
CS15 General exposures (closed systems), OC9 Outdoor.	Handle substance within a closed system. E47.
CS502 Bulk closed unloading	Ensure material transfers are under containment or extract ventilation. E66.
CS8 Drum/batch transfers	Ensure material transfers are under containment or extract ventilation. E66.
CS507 Refuelling	Ensure material transfers are under containment or extract ventilation. E66.
GEST_12I Use as a fuel, CS107 (closed systems)	Handle substance within closed systems. E47.
CS5 Equipment maintenance	Drain down system prior to equipment break-in or maintenance. E65. Retain drain downs in sealed storage pending disposal or for subsequent recycle. ENVT4. Clear spills immediately. C&H13. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. E1. Ensure operatives are trained to minimise exposures. EI19.
CS67 Storage.	Store substance within a closed system. E84. Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. E1.
Additional information on the basis for the allocation of the identified OCs and RMMs is contained in Appendices 1 to 3	
Section 2.2 Control of environmental exposure	
Product characteristics	
Substance is complex UVCB [PrC3]. Predominantly hydrophobic [PrC4a].	
Amounts used	
Fraction of EU tonnage used in region	0.1
Regional use tonnage (tonnes/year)	1.19E6
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	5.9E2
Maximum daily site tonnage (kg/day)	1.6E3
Frequency and duration of use	

Continuous release [FD2].	
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 process (initial release prior to RMM)	0.01
Release fraction to wastewater from process (initial release prior to RMM)	0.00001
Release fraction to soil from process (initial release prior to RMM)	0.00001
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
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]. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required [TCR9].	
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 (%)	3.4
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of (%)	0
Organisation measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils [OMS2]. Sludge should be incinerated, contained or reclaimed [OMS3].	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	95.5
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	95.5
Maximum allowable site tonnage (M_{Safe}) (kg/d)	1.5E4
Assumed domestic sewage treatment plant flow (m^3/d)	2000
Conditions and measures related to external treatment of waste for disposal	
Combustion emissions limited by required exhaust emission controls [ETW1]. Combustion emissions considered in regional exposure assessment [ETW2].	
Conditions and measures related to external recovery of waste	
This substance is consumed during use and no waste of the substance is generated [ERW3].	
Additional information on the basis for the allocation of the indentified OCs and RMMs is contained in Petrorisk file	
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. G21.	
3.2. Environment	
The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model [EE2].	

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. G22. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. G23. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. G32. Available hazard data do not support the need for a DNEL to be established for other health effects. G36. Risk Management Measures are based on qualitative risk characterisation. G37.
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 [DSU1]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

4. USE OF UNLEADED PETROL AS A FUEL – CONSUMER

Section 1 Exposure Scenario Title Low boiling point naphthas (Gasoline) that is classified as H340 and/or H350 and/or H361;(containing 0% to 1% benzene)	
Title	
Use as a fuel	
Use Descriptor	
Sector(s) of Use	21
Product Categories	13 Further information on the mapping and allocation of PC codes is contained in Table 9.1
Environmental Release Categories	9a, 9b
Specific Environmental Release Category	ESVOC SpERC 9.12c.v1
Processes, tasks, activities covered	
Covers the consumer use of substance 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 (Pa)	Liquid, vapour pressure > 10 kPa at STP OC5	
Concentration of substance in product	Unless otherwise stated, cover concentrations up to 100% [ConsOC1]	
Amounts used	Unless otherwise stated, covers use amounts up to37500g [ConsOC2]; covers skin contact area up to 420cm2 [ConsOC5]	
Frequency and duration of use/exposure	Unless otherwise stated, covers use frequency up to 0.143 times per day [ConsOC4]; covers exposure up to 2 hours per event [ConsOC14]	
Other Operational Conditions affecting exposure	Unless otherwise stated assumes use at ambient temperatures [ConsOC15]; assumes use in a 20 m^3 room [ConsOC11]; assumes use with typical ventilation [ConsOC8].	
Product Category	**Specific Risk Management Measures and Operating Conditions**	
PC13:Fuels--Liquid - subcategories added: Automotive Refuelling	OC	Unless otherwise stated, covers concentrations up to 1% [ConsOC1]; covers use up to 52 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 210.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 37500g [ConsOC2]; covers outdoor use [ConsOC12]; covers use in room size of 100m3[ConsOC11]; for each use event, covers exposure up to 0.05hr/event[ConsOC14];
	RMM	No specific RMMs developed beyond those OCs stated

PC13: Fuels-Liquid - subcategories added: Scooter Refuelling	OC	Unless otherwise stated, covers concentrations up to 1% [ConsOC1]; covers use up to 52 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 210.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 3750g [ConsOC2]; covers outdoor use [ConsOC12]; covers use in room size of 100m3[ConsOC11]; for each use event, covers exposure up to 0.03hr/event[ConsOC14];
	RMM	No specific RMMs developed beyond those OCs stated
PC13: Fuels--Liquid - subcategories added: Garden Equipment - Use	OC	Unless otherwise stated, covers concentrations up to 1% [ConsOC1]; covers use up to 26 days/year [ConsOC3]; covers use up to 1 time/on day of use [ConsOC4]; for each use event,
		covers use amounts up to 750g [ConsOC2]; covers outdoor use [ConsOC12]; covers use in room size of 100m3[ConsOC11]; for each use event, covers exposure up to 2.00hr/event [ConsOC14];
	RMM	No specific RMMs developed beyond those OCs stated
PC13: Fuels--Liquid (subcategories added): Garden Equipment - Refuelling	OC	Unless otherwise stated, covers concentrations up to 1% [ConsOC1]; covers use up to 26 days/year[ConsOC3]; covers use up to 1 time/on day of use[ConsOC4]; covers skin contact area up to 420.00 cm2 [ConsOC5]; for each use event, covers use amounts up to 750g [ConsOC2]; Covers use in a one car garage (34m3) under typical ventilation [ConsOC10]; covers use in room size of 34m3[ConsOC11]; for each use event, covers exposure up to 0.03hr/event[ConsOC14];
	RMM	No specific RMMs developed beyond those OCs stated
Additional information on the basis for the allocation of the identified OCs and RMMs is contained in Appendices 1 to 3		

Section 2.2 Control of environmental exposure

Product characteristics	
Substance is complex UVCB [PrC3]. Predominantly hydrophobic [PrC4a].	
Amounts used	
Fraction of EU tonnage used in region	0.1
Regional use tonnage (tonnes/year)	1.39E7
Fraction of Regional tonnage used locally	0.0005
Annual site tonnage (tonnes/year)	7.0E3
Maximum daily site tonnage (kg/day)	1.9E4
Frequency and duration of use	
Continuous release [FD2].	
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) [OOC7]) Release fraction to air from process (initial release prior to RMM)	0.01
Release fraction to wastewater wide dispersive use [OOC8]	0.00001

Release fraction to soil from wide dispersive use (regional use only) [OOC9]	0.00001
Conditions and measures related to municipal sewage treatment plant	
Risk from environmental exposure is driven by humans via indirect exposure (primarily inhalation) [STP7k].	
Estimated substance removal from wastewater via domestic sewage treatment (%)	95.5
Maximum allowable site tonnage (M_{Safe}) (kg/d)	1.8E5
Assumed domestic sewage treatment plant flow (m^3/d)	2000
Conditions and measures related to external treatment of waste for disposal	
Combustion emissions limited by required exhaust emission controls [ETW1]. Combustion emissions considered in regional exposure assessment [ETW2].	
Conditions and measures related to external recovery of waste	
This substance is consumed during use and no waste of the substance is generated [ERW3].	
Additional information on the basis for the allocation of the identified OCs and RMMs is contained in Petrorisk file	

Section 3 Exposure Estimation

3.1. Health

The ECETOC TRA tool has been used to estimate consumer exposures, consistent with the content of ECETOC Report #107 and the Chapter R15 of the IR&CSA TGD. Where exposure determinants differ to these sources, then they are indicated.

3.2. Environment

The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model [EE2].

Section 4 Guidance to check compliance with the Exposure Scenario

4.1. Health

Predicted exposures are not expected to exceed the applicable consumer reference values when the operational conditions/risk management measures given in section 2 are implemented. G39.

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. G23.

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 [DSU1]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].