

Unleaded Gasoline

Material safety data sheet according to (EC) No 1907/2006



Section 1: Identification of the substance/mixture and of the company

1.1 Product identifier

Product name: Unleaded Gasoline, DIN EN 228, max. 10 Vol.-% EtOH
SOK 95 (E10) 10 ppm DIN EN 228
SOK 95 (E5) 10 ppm DIN EN 228
SOK Plus 98 10 ppm DIN EN 228
SOK Plus 95 (E0) 10 ppm DIN EN 228
SOK Plus 98 (E0) 10 ppm DIN EN 228

UFI: C600-604X-K00U-5YTR

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

Relevant identified uses: Only for use as fuel for gasoline engines, and in engines that are approved for this fuel.

Uses advised against: Other uses are not supported.

1.3 Details of the supplier of the safety data sheet

Supplier: Mabanaft Deutschland GmbH
Am Strandkai 1
20457 Hamburg
GERMANY

Tel.: +49 (0)40 37004 0
Fax: +49 (0)40 37004 7173

Information provided to technical issues by: Kevin Tatzki
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1.4 Emergency telephone number

Giftinformationszentrum-Nord: +49 (0)551 192 40

Section 2: Hazards identification

2.1 Classification of the substance or mixture

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

This mixture is classified as hazardous according to (EC) No. 1272/2008.

Flammable liquids, Category 1; H224
Aspiration toxicity, Category 1; H304
Skin corrosion/irritation, Category 2; H315
Eye irritation; Category 2; H319
Specific target organ toxicity – single exposure, Category 3; H336
Germ cell mutagenicity, Category 1B; H340
Carcinogenicity, Category 1B; H350
Toxic for Reproduction, Category 2; H361fd
Hazardous to the aquatic environment – Long-term Hazard, Category 2; H411

For the full text of hazard statement mentioned in this section, see section 16.

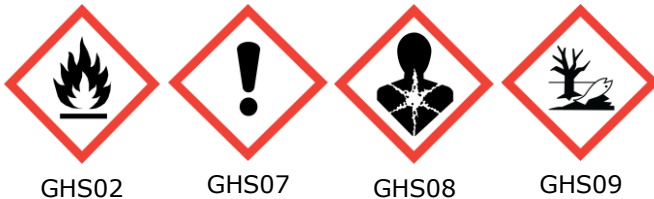
2.2 Label elements

2.2.1 Labelling according to regulation (EC) No. 1272/2008 [CLP]

Hazard pictogram

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Signal Word: DANGER

Hazard statements

- H224 – Extremely flammable liquid and vapour.
- H304 – May be fatal if swallowed and enters airways.
- H315 – Causes skin irritation.
- H319 – Causes serious eye irritation.
- H336 – May cause drowsiness or dizziness.
- H340 – May cause genetic defects.
- H350 – May cause cancer.
- H361fd – Suspected of damaging fertility. Suspected of damaging the unborn child.
- H411 – Toxic to aquatic life with long lasting effects.

Precautionary statements

- P201 – Obtain special instruction before use.
- P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P261 – Avoid breathing dust/fumes/gas/mist/vapours/spray.
- P273 – Avoid release to the environment.
- P280 – Wear protective gloves/protective clothing/eye protection/face protection.
- P301 + P310 – If swallowed: Immediately call a poison center or doctor/physician.
- + P331 – Do not induce vomiting.
- P302 + P352 – IF ON SKIN: Wash with plenty of soap and water.
- P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses. If present and easy to do. Continue rinsing.
- P308 + P313 – If exposed or concerned: Get medical advice/attention.
- P391 – Collect spillage.
- P403 + P233 – Store in a well-ventilated place. Keep container tightly closed.
- P501 – Dispose of contents/container according to local/regional/national/international regulations.

2.3 Other hazards

Does not meet the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) substances.

The material can accumulate static charge, followed by combustion. This can be prevented by the use of suitable additives, or by avoiding large flow rates.

Liquid evaporates quickly and can ignite and cause a burst of flame.

Section 3: Composition/information on ingredients

3.1 Substance

Not applicable.

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3.2 Mixtures

Component	Product identifier	% ¹⁾	Classification according to Regulation (EC) No. 1272/2008
Gasoline	(EG-Nr.) 289-220-8 (CAS-Nr.) 86290-81-5 (REACH Registrierungs-Nr.) 01-2119471335-39-0146	≤ 100	Flam. Liq., Cat. 1; H224 Asp. Tox., Cat. 1; H304 Skin Corr., Cat. 2; H315 STOT SE, Cat. 3; H336 Muta., Cat. 1B; H340 Carc., Cat. 1B; H350 Repr., Cat. 2; H361fd Aquatic Chronic, Cat. 2; H411
Ethanol	(EG-Nr.) 200-578-6 (CAS-Nr.) 64-17-5 (REACH Registrierungs-Nr.) 01-2119457610-43	≤ 10	Flam. Liq., Cat. 2; H225 Eye Irrit., Cat. 2; H319
Methanol	(EG-Nr.) 200-659-6 (CAS-Nr.) 67-56-1 (REACH Registrierungs-Nr.) 01-2119433307-44	< 3	Flam. Liq., Cat. 2; H225 Acute Tox., Cat. 3; H301 Acute Tox., Cat. 3; H311 Acute Tox., Cat. 3; H331 STOT SE, Cat. 1; H370
2-Methyl-1-propanol	(EG-Nr.) 201-148-0 (CAS-Nr.) 78-83-1 (REACH Registrierungs-Nr.) 01-2119484609-23	< 3	Flam. Liq., Cat. 3; H226 Skin Irrit., Cat. 2; H315 Eye Dam., Cat. 1; H318 STOT SE, Cat. 3; H335 STOT SE, Cat. 3; H336
Toluol ²⁾	(EG-Nr.) 203-625-9 (CAS-Nr.) 108-88-3	0 - 25	Flam. Liq., Cat. 2; H225 Asp. Tox., Cat. 1; H304 Skin Corr., Cat. 2; H315 STOT SE, Cat. 3; H336 Repr., Cat. 2; H361fd STOT RE, Cat. 2; H373
Xylol ²⁾	(EG-Nr.) 215-535-7 (CAS-Nr.) 1330-20-7	0 - 20	Flam. Liq., Cat. 3; H226 STOT SE, Cat. 3; H335 STOT RE, Cat. 2; H373 Asp. Tox., Cat. 1; H304 Skin Irrit., Cat. 2; H315 Eye Irrit., Cat. 2; H319 Acute Tox., Cat. 4; H312 Acute Tox., Cat. 4; H332 Aquatic Chronic, Cat. 3; H412
n-Hexan ²⁾	(EG-Nr.) 203-777-6 (CAS-Nr.) 110-54-3	0 - 5	Flam. Liq., Cat. 2; H225 STOT SE, Cat. 3; H336 STOT RE, Cat. 2; H373 Asp. Tox., Cat. 1; H304 Skin Irrit., Cat. 2; H315 Eye Irrit., Cat. 2; H319 Repr., Cat. 2; H361f Aquatic Chronic, Cat. 3; H411
Isopentan ²⁾	(EG-Nr.) 201-142-8 (CAS-Nr.) 78-78-4	0 - 20	Flam. Liq., Cat. 1; H224 Asp. Tox., Cat. 1; H304 STOT SE, Cat. 3; H336 Aquatic Chronic, Cat. 2; H411
Pentan ²⁾	(EG-Nr.) 203-692-4 (CAS-Nr.) 109-66-0	0 - 5	Flam. Liq., Cat. 2; H225 Asp. Tox., Cat. 1; H304 STOT SE, Cat. 3; H336 Aquatic Chronic, Cat. 2; H411
Methyl-tert-butylether	(EG-Nr.) 216-309-7 (CAS-Nr.) 1634-04-4	≤ 15	Flam. Liq., Cat. 2; H225 Skin Irrit., Cat. 2; H315
Ethyl-tert-butylether	(EG-Nr.) 211-309-7 (CAS-Nr.) 637-92-3	≤ 15	Flam. Liq., Cat. 2; H225 STOT SE, Cat. 3; H336
Ethylbenzol ²⁾	(EG-Nr.) 202-849-4 (CAS-Nr.) 100-41-4	0 - 5	Flam. Liq., Cat. 2; H225 Acute Tox., Cat. 4; H332 Asp. Tox., Cat. 1; H304 STOT RE, Cat. 2; H373 Aquatic Chronic, Cat. 3; H412

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Component	Product identifier	% ¹⁾	Classification according to Regulation (EC) No. 1272/2008
1,2,4-Trimethylbenzol ²⁾	(EG-Nr.) 202-436-9 (CAS-Nr.) 95-63-6	0 - 5	Flam. Liq., Cat. 3; H226 Acute Tox., Cat. 4; H332 Skin Irrit., Cat. 2; H315 Eye Irrit., Cat. 2; H319 STOT SE, Cat. 3; H335 Aquatic Chronic, Cat. 2; H411
Benzol ²⁾	(EG-Nr.) 200-753-7 (CAS-Nr.) 71-43-2	< 1	Flam. Liq., Cat. 2; H225 Carc., Cat. 1A; H350 Muta., Cat. 1B; H340 STOT RE, Cat. 1; H372 Asp. Tox., Cat. 1; H304 Eye Dam., Cat. 2; H319 Skin Corr., Cat. 2; H315 Aquatic Chronic, Cat. 3; H412

¹⁾ Concentration is indicated in vol.-%.

²⁾ These are single components within the UVCB substance gasoline (CAS-No. 86290-81-5).

For the full text of the R-phrases and hazard statements see section 16.

Section 4: First aid measures

4.1 Description of first aid measures

Inhalation: If breathing problems or other symptoms of exposure occur, remove affected person from source of exposure and put into a comfortable position in the fresh air. If person has respiratory problems oxygen should be supplied by qualified person. If symptoms persist, seek medical attention immediately.

Skin contact: Remove contaminated shoes and clothing and rinse affected area with water. If the skin surface is damaged, apply sterile cover and seek medical help. If the skin surface is not damaged, clean affected area thoroughly by washing with mild soap and water or a waterless hand cleanser. If irritation or redness develops, seek medical help. Clean contaminated clothing before reuse. If the product is injected into or under the skin or any body part, the person should be immediately examined by a physician, regardless of appearance and size of the wound.

Eye contact: Flush eyes with clean water if irritation occurs. If symptoms persist, consult a doctor.

Chocking: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause lung damage. If victim is drowsy or unconscious put person in safety position. If possible, do not leave the person unattended and continuously monitor breathing. Seek medical help.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Acute: Headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue.

Delayed: Dry skin and possible irritation with repeated or prolonged exposure.

4.3 Indication of any immediate medical attention and special treatment needed

Note to physician: Possible symptoms: respiratory disorder, fainting, headache, nausea, drowsiness, dizziness.

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Risks: Risk of circulatory collapse, Risk of respiratory disorders.

Treatment: Symptomatic treatment, if necessary provide oxygen. On vomiting, danger of entering the lungs. Monitor circulatory system.

Section 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: Foam, carbon dioxide, dry chemical, water spray (if possible with addition of a wetting agent).

Inappropriate extinguishing agents: Do not use water jet in order to prevent scatter and the spread of the fire. Do not use water and foam on the same surface, as water dissolves the foam.

5.2 Special hazards arising from the substance or mixture

Unusual exposure risks: Petrol easily evaporates at ambient temperature. Evaporated product is heavier than air and therefore it can accumulate near the ground. Even distant ignition sources can be dangerous.

Fire and explosion protection: Keep away from sources of ignition, do not smoke and avoid open fire. Take precautionary measures against static discharges.

5.3 Advice for firefighters

In case of a large fire with open flames wear full fire resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Isolate fire immediately, advise unauthorized people to leave the area. Stop the release of the product, if this can be done safely. Remove undamaged container from the danger zone if this can be done safely. Water spray may be useful to restrict the formation of vapor and to disperse it, and to protect persons. Avoid spreading burning liquid with cold water. Cool any equipment exposed to fire with water, if this can be done safely.

See Section 9 for inflammatory properties, including flash point and flame (explosion)-limits.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Extremely flammable. Spilled product constitutes a fire hazard and can form an explosive atmosphere. Keep away all sources of ignition and hot metal surfaces from spilled product. The use of explosion-proof electrical equipment is recommended. Keep upwind and away from the spilled product. Avoid direct contact with the product. Additionally, wear other appropriate protective equipment, as required (refer to section 8). See Sections 2 and 7 for further information on hazards and precautions. In case of accidental release notify the authority responsible in accordance with all applicable regulations.

6.2 Environmental precautions

When product contaminates drains, other unofficial drainage systems and natural waterways inform the authority. Prevent spilled material from entering into drains, other unofficial drainage systems and natural waterways. Use water sparingly to avoid contamination, especially of the environment.

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6.3 Methods and materials for containment and cleaning up

Absorb spillage with suitable liquid-binding material and dispose of impregnated material according to regulations.

6.4 Reference to other sections

Protection measures in section 7, 8 and 13.

Section 7: Handling and storage

7.1 Precautions for safe handling

Information for safe handling: Avoid spills and the formation of aerosols. When using this product do not eat, drink or smoke. Materials, which are used for absorption of the product, represent a fire hazard.

When decanting larger quantities without an extraction system: Respiratory Protection.

Personal protective equipment: Use suitable respirator, eye protection, safety glasses, antistatic boots.

Hand protection: Gloves.

Information about fire and explosion protection: Keep away from ignition sources, do not smoke. Electrostatic charge may accumulate and create a hazardous situation when handling or processing this product. Vapours are heavier than air and may spread and can form explosive mixtures. To prevent a fire or explosion, the static electricity must be grounded before the transfer of the product. The use of explosion-proof electrical equipment is recommended and may be required.

7.2 Conditions for safe storage, including any incompatibilities

Portable containers: Static electricity can ignite gasoline vapors when filling portable containers. For the storage of gasoline use only approved container. Place the container before filling it to the ground. Do not fill a portable container on a vehicle or ship. Keep container tightly closed and properly labelled. Store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces and all kinds of ignition sources. Mark storage area with "no smoking and open flames". Keep away from incompatible materials (see section 10). Protect container against physical damage.

"Empty" containers retain residues and can be dangerous. Do not pressurize, cut, weld, drill, grind, or heat, these containers. They may explode and cause injury. "Empty" drums should be completely drained, properly closed, and should be sent immediately to the supplier or other appropriate recyclers. All containers should be disposed of in an environmentally safe manner and in accordance with state regulations. Before working on or in tanks which contain or have contained this material, consult regarding cleaning repair, welding, or other scheduled work in the corresponding instructions. Separate storage or outside storage is recommended. Storage in buildings must meet the standards of the countries or commission and the relevant fire safety codes.

7.3 Specific end uses(s)

See section 1.2. For further information consult the attached, supplementary exposure scenarios.

Section 8: Exposure controls/personal protection

8.1 Control parameters

Gasoline (CAS-Nr. 86290-81-5)

ACGIH: STEL: 500 ppm
TWA: 300 ppm

Ethanol (CAS-Nr. 64-17-5)

ACGIH: STEL: 1000 ppm
TRGS: AGW: 200 ppm
AGW: 380 mg/m³

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Methanol (CAS-Nr. 67-56-1)

ACGIH: TWA: 200 ppm
TWA: 260 mg/m³
TRGS: AGW: 200 ppm
AGW: 270 mg/m³

Biological limits due to „Verordnung zur arbeitsmedizinischen Vorsorge vom 18. Dezember 2008“ are to be considered. Biological limits due to TRGS 903 are to be considered.

2-Methyl-1-propanol (CAS-Nr. 78-83-1)

TRGS: AGW: 100 ppm
AGW: 310 mg/m³

Toluol (CAS-Nr. 108-88-3)

ACGIH: TWA: 50 ppm
TWA: 192 mg/m³
STEL: 100 ppm
STEL: 384 mg/m³
TRGS: AGW: 50 ppm
AGW: 190 mg/m³

Biological limits due to „Verordnung zur arbeitsmedizinischen Vorsorge vom 18. Dezember 2008“ are to be considered. Biological limits due to TRGS 903 are to be considered.

Xylol (CAS-Nr. 1330-20-7)

ACGIH: TWA: 50 ppm
TWA: 221 mg/m³
STEL: 100 ppm
STEL: 442 mg/m³
TRGS: AGW: 100 ppm
AGW: 440 mg/m³

Biological limits due to „Verordnung zur arbeitsmedizinischen Vorsorge vom 18. Dezember 2008“ are to be considered. Biological limits due to TRGS 903 are to be considered.

n-Hexan (CAS-Nr. 110-54-3)

ACGIH: TWA: 20 ppm
TWA: 72 mg/m³
Can be absorbed through the skin.
TRGS: AGW: 50 ppm
AGW: 180 mg/m³

Biological limits due to TRGS 903 are to be considered.

Isopentan (CAS-Nr. 78-78-4)

ACGIH: TWA: 1000 ppm
TWA: 3000 mg/m³
TRGS: AGW: 1000 ppm
AGW: 3000 mg/m³

Pentan (CAS-Nr. 109-66-0)

ACGIH: TWA: 1000 ppm
TWA: 3000 mg/m³

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TRGS: AGW: 1000 ppm
AGW: 3000 mg/m³

Methyl-tert-butylether (CAS-Nr. 1634-04-4)

ACGIH: STEL: 100 ppm
STEL: 367 mg/m³
TWA: 50 ppm
TWA: 183,5 mg/m³
TRGS: AGW: 50 ppm
AGW: 180 mg/m³

Ethylbenzol (CAS-Nr. 100-41-4)

ACGIH: TWA: 100 ppm
TWA: 442 mg/m³
STEL: 200 ppm
STEL: 884 mg/m³
TRGS: AGW: 20 ppm
AGW: 88 mg/m³

Biological limits due to TRGS 903 are to be considered.

1,2,4-trimethylbenzol (CAS-Nr. 95-63-6)

ACGIH: TWA: 20 ppm
TWA: 100 mg/m³
TRGS: AGW: 20 ppm
AGW: 100 mg/m³

Biological limits due to TRGS 903 are to be considered.

Benzol (CAS-Nr. 71-43-2)

ACGIH: TWA: 1 ppm
TWA: 3,25 mg/m³
Can be absorbed through the skin.
Tolerable concentration: 1,9 mg/m³ (0,6 ppm)
Acceptable concentration 0,2 mg/m³ (60 ppb)
TRGS: Biological limits due to „Verordnung zur arbeitsmedizinischen
Vorsorge vom 18. Dezember 2008“ are to be considered

DNEL Worker

Chemical name	Acute, systemic effects	Acute, local effects	Long term, systemic effects	Long term, local effects
Gasoline 86290-81-5	1300 mg/m ³ /15min (inhalation)	1100 mg/m ³ /15min (inhalation)		840 mg/m ³ /8h (inhalation)
Ethanol 64-17-5		1900 mg/m ³ /15min (inhalation)	343 mg/kg/8h (dermal) 950 mg/kg/8h (inhalation)	
Methanol 67-56-1	260 mg/m ³ /15min (inhalation) 40 mg/kg bw/day (dermal)	260 mg/kg/15min (inhalation)	260 mg/kg/8h (inhalation) 40 mg/kg bw/day (dermal)	260 mg/m ³ /8h (inhalation)
Ethyl-tert-butylether 637-92-3	2800 mg/m ³ /15min (inhalation)		352 mg/m ³ /8h (inhalation) 6767 mg/kg/8h (dermal)	105 mg/m ³ /8h (inhalation)

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DNEL Customer

Chemical name	Acute, systemic effects	Acute, local effects	Long term, systemic effects	Long term, local effects
Benzin 86290-81-5	1200 mg/m ³ /15min (inhalation)	640 mg/m ³ /15min (inhalation)		180 mg/m ³ /8h (inhalation)
Ethanol 64-17-5		950 mg/m ³ /15min (inhalation)	206 mg/kg/24h (dermal) 114 mg/kg/24h (inhalation) 87 mg/m ³ /24h (oral)	
Methanol 67-56-1	50 mg/m ³ /15min (inhalation) 8 mg/kg bw/day (dermal) 8 mg/kg bw/day (oral)	50 mg/kg/15min (inhalation)	206 mg/kg/24h (inhalation) 8 mg/kg bw/day (dermal) 8 mg/m ³ bw/day (oral)	50 mg/m ³ /24h (inhalation)
Ethyl-tert-butylether 637-92-3	1200 mg/m ³ /15min (inhalation)		105 mg/m ³ /24h (inhalation) 4060 mg/kg/24h (dermal) 12,5 mg/kg/24h (oral)	63 mg/m ³ /24h (inhalation)

Predicted no effect concentration (PNEC)

Chemical name	Water	Sediment	Soil	Air	STP	Oral
Ethanol 64-17-5	0,96 mg/l aqua – freshwater(fw) 0,79 mg/l aqua – marine water(mw) 2,75 mg/l aqua – intermittent releases(or)	3,6 mg/kg d.w.				0,72 g/kg food
Methanol 67-56-1	154 mg/l fw 15,4 mg/l mw 1540 mg/l or	540 mg/kg dw	23,5 mg/kg dw		100 mg/l	
2-Methyl-1-propanol 78-83-1	0,4 mg/l fw 0,04 mg/l mw	1,56 mg/kg	0,0765 mg/kg soil		10 mg/l	
Ethyl-tert-butylether 637-92-3	0,51 mg/l fw 0,017 mg/l mw 1,1 mg/l or	28,5 mg/kg dw (freshwater sediment) 1,145 mg/kg dw (marine sediment)	2,41 mg/kg w.w		12,5 mg/l	

8.2 Exposure controls

Respiratory protection: If the exposure to air exceeds the exposure limit wear an approved air-purifying respirator with Type A filter for organic gases and vapours. A respiratory program that complies with the recommendations in EN 529:2005, must always be followed when the use of a respirator in the workplace is required. Air-purifying respirators are providing limited protection and should not be used in atmospheres that exceed a maximum concentration (according to the regulations or instructions of the manufacture).

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Skin protection and hand protection: Wearing impervious gloves, which are insensitive to the particular product, is recommended to avoid skin contact. Users should check with the manufacturer to verify the tightness of their products. Depending on the exposure and use, an additional protection is required in order to avoid contact with the skin, including chemical resistant boots, aprons, hoods, coveralls, or full body suits. Proposed protective materials: nitrile rubber.

Eye/face protection: Eye protection that meets or exceeds EN 166 is recommended to protect against potential eye contact, irritation or injury. Depending on the operating conditions, a tightly seated eye and face protection is necessary.

Technical measures: If current ventilation practices are not sufficient to keep concentrations below the established exposure limits, additional engineering controls may be required.

Other protective equipment: A safety shower and an eye shower should be located in the work area. Clean contaminated clothing and shoes before reuse.

Exposure controls: see section 6, 7, 12 and 13.

The proposals outlined in this section in terms of exposure control and specific types of protective equipment are based on readily available information. Users should confirm the performance of their protective equipment by contacting the specific manufacturer. Special circumstances may make it necessary to contact a specialist for good hygiene and safety.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Data represents typical values and is not intended for specification purposes.

Physical state:	Liquid
Colour:	Colourless
Odour:	Typical petroleum
Melting point/freezing point:	< - 60 °C at 101.325 kPa
Boiling point and boiling range:	25 – 210 °C at 101.325 kPa
Flammability:	Yes
Lower and upper explosion limit:	≥ 1,4 Vol.-% in air, ca.7,6 Vol. -% in air
Flash point:	< - 40 °C at 101.325 kPa
Auto-ignition temperature:	> 200 °C at 101.325 kPa
Decomposition temperature:	N/B
pH:	N/A
Kinematic viscosity:	0.4 – 0.9 cSt at 40 °C
Solubility:	Soluble in organic solvents. Insoluble in water.
Partition coefficient n-octanol/water (log value):	2 - 7
Vapour pressure:	45 – 90 kPa at 37.8 °C
Relative density:	0.720 - 0.775 kg/L at 15 °C
Relative vapour density:	> 1 (Air = 1)
Particle characteristics:	N/A

9.2 Other information

None.

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Section 10: Stability and reactivity

10.1 Reactivity

Can oxidize in the presence of air.

10.2 Chemical stability

Stable under normal temperature and intended use.

10.3 Possibility of hazardous reactions

No dangerous reactions are expected.

10.4 Conditions to avoid

Prevent high temperatures and sources of ignition. Prevent vapor accumulation.

10.5 Incompatible materials

Prevent contact with strong oxidizing agents and strong reducing agents.

10.6 Hazardous decomposition products

No hazardous decomposition products under intended use.

Section 11: Toxicological information

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

11.1.1 Information on relevant hazard classes

Acute toxicity:	The mixture is not classified as acutely toxic (based on available data, the classification criteria are not met). LC ₅₀ > 5.2 mg/l, 4 h, rat, intake by inhalation. LD ₅₀ > 2000 mg/kg, rabbit, dermal absorption. LD ₅₀ > 5000 mg/kg, rat, ingestion.
Skin corrosion/irritation:	Substance is irritating to the skin. Repeated exposure may cause skin dryness or cracking.
Serious eye damage/eye irritation:	Moderately irritating to eyes.
Sensitization:	There are no test results or other study results showing that the substance potentially causes sensitization to skin or respiratory tract.
Germ cell mutagenicity:	May cause genetic defects. Based on information for component gasoline. It was negative in the microbial mutagenicity and unscheduled DNA testing to hepatocyte of rats. Gasoline induced in vivo no chromosomal aberrations in bone marrow cells of rats and was negative in a dominant lethal mutation test in mice.
Carcinogenicity:	May cause cancer. Based on information provided to the component. Inhalation studies over two years to complete vaporized unleaded gasoline produced in male rats an increased volume of kidney tumors and in female rats increased volume of liver tumors. However Unleaded Gasoline was considered by IARC as potential carcinogenic.

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Reproductive toxicity:	Suspected of damaging the unborn child. Suspected of damaging fertility. In pregnant laboratory animals (rats and mice), no evidence of developmental toxicity was found when an inhalation exposure of up to 9000 ppm unleaded petrol vapor were exposed. Recovered petrol vapor was evaluated in a two-generation reproductive toxicity study at concentrations up to 7400 ppm. Reproductive parameters were not adversely affected and there were no adverse effects on survival of offspring or its growth observed.
Specific target organ toxicity after single exposure:	May cause drowsiness and dizziness.
Specific target organ toxicity after repeated exposure:	It is expected no harmful effects on organs in repeated exposure.
Risk of aspiration:	May be fatal if swallowed and enters airways.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Contains no substances with known endocrine-disrupting properties for human health.

Section 12: Ecological information

12.1. Toxicity

Studies on the acute aquatic toxicity of gasoline and naphtha samples show acute toxicity values that are higher than 1 mg/L, and usually between 1 – 100 mg/L. These tests were performed on Water accommodated Fractions (WAF) carried out in closed systems to prevent the loss evaporation. The results agree with the predicted aquatic toxicity of these materials. Such materials must be held to be toxic to aquatic organisms, with potentially harmful long-term effects on the aquatic environment.

12.2 Persistence and degradability

The hydrocarbons in this material are not readily biodegradable. However, they are regarded as inherently biodegradable because their hydrocarbon components can be degraded by microorganisms. Persistence per IOPC definition: Non-persistent.

12.3 Bioaccumulative potential

Log (K_{ow}) values that were measured for hydrocarbon components of this material are between 3 and 6 and are therefore regarded as potentially bioaccumulative. In practice, metabolic processes or physical properties can prevent this impact or limit bioavailability.

12.4 Mobility in soil

Release in the water result in a hydrocarbon film that floats on the surface and spreads. For the lighter components, evaporating is an important loss process that reduces the risk to aquatic organisms. In air, these hydrocarbons are removed by photolysis through the reaction with hydroxyl radicals. The half-lives of the hydrocarbons is between 6.5 days for benzene and 0.5 days for n-dodecane.

12.5 Results of PBT and vPvB assessment

The mixture is neither a PBT nor a vPvB substance, according to the result of the review.

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12.6 Endocrine disrupting properties

This substance has no relevant endocrine disrupting properties for non-target organisms because it does not meet the criteria set out in Section B of Regulation (EU) No 2017/2100.

12.7 Other adverse effects

German water hazard class: WGK 3 (AwSV).

Section 13: Disposal considerations

13.1 Waste treatment methods

This material - if discarded as produced - is in accordance with directive 2008/98/EC hazardous waste.

Product disposal: Send to a licensed waste contractor. If possible the product should be recycled. Disposal in accordance with the Kreislaufwirtschafts-Abfallgesetz (KrWG). The contact of spilled material with soil, waterways, drains and sewers must be avoided. Empty containers may contain residual amounts. Empty containers represent a fire hazard as they may contain flammable product residues and vapor. Never weld or braze empty containers.

EWC Waste Disposal No.: 13 07 02 "petrol". The listed waste code represents only a recommendation. The waste producer is responsible for the concrete specification of the waste. However, deviation from the intended use and / or contaminants may require an alternative waste disposal key number by the end user.

Legislation for waste treatment

Disposal: Directive 2006/12/EC
Incineration: Directive 2000/76/EC
Landfilling: Directive 1999/31/EC

In addition, other national and regional rules apply.

Section 14: Transport information

14.1 UN number or ID number

UN number: 1203

14.2 UN proper shipping name

ADR/RID/ADN/ADNR: BENZIN
IMDG-Code: GASOLINE
ICAO-TI/IATA-DGR: Gasoline

14.3 Transport hazard class(es)

14.3.1 Land transport (ADR/RID) / Inland water transport (ADN/ADNR) / Sea transport (IMDG-Code) / Air transport (ICAO-TI/IATA-DGR)

Transport hazard class: 3



14.4 Packing group

Packing Group: II

14.5 Environmental hazards

Environmental hazard: Environmentally hazardous substance.

14.6 Special precautions for user

If this material is transported on ships in international waters, MARPOL Annex 1 must be fulfilled.

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14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

Section 15: Regulatory information

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

15.1.1 EU rules

Regulation (EC) No. 1907/2006:

Annex XVII, No. 3.

Guideline 96/82/EC (Seveso II):

The product is subject to the Seveso directive.

Guideline 2000/76/EC:

Concerning waste incineration.

Guideline 1999/31/EC:

Concerning disposal of waste.

European standard for PPE:

EN 166:2002 Eye protection.

EN 529:2005 Respirators.

EN 374-1:2016 Protective gloves against chemicals and microorganisms.

Directive 89/686/EEC PPE

The product is subject to the Directive 2004/37/EC.

Risks related to exposure to carcinogens or mutagens at work Directive 2004/37/EC:

The product is subject to the Directive 92/85/EEC.

Measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding RL 92/85/EEC:

15.1.2 National regulations (Germany)

Technische Anleitung Luft (TA Luft):

Gasoline is not listed by name. However, the sections 5.2.5 and 5.2.7 must be observed.

Störfall-Verordnung (12. BImSchV):

The product is subject to the german "Störfall-Verordnung".

German water hazard class:

WGK 3 (AWSV).

Other regulations:

Observe Professional Association Principles for occupational medical examinations, Occupational Exposure Limits, german Water Act and technical codes.

15.2 Chemical safety assessment

For this substance a chemical safety assessment has been carried out.

Section 16: Other information

Date of issue: 10.07.2024

Revision of sheet dated: 25.09.2023

Revised sections: Section 1 – section 16

Full text of R-phrases and hazard statements

H224 Extremely flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H340 May cause genetic defects.

H350 May cause cancer.

H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

H411 Toxic to aquatic life with long lasting effects.

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Important literature and data sources that was used to compile the safety data sheet

The data comes from several sources (manufacturer, CONCAWE EU IUCLID database, BAuA, ECHA, etc.)

Abbreviations and Acronyms

ACGIH	= American Conference of Industrial Hygienists
BImSchV	= Verordnung zur Durchführung des Bundes-Immissionsschutzgesetzes
N/A	= Nicht anwendbar
N/B	= Nicht bestimmt
PSA	= Persönliche Schutzausrüstung/ Personal Protective Equipment
STEL	= Short Term Exposure Limit (Kurzzeitexpositionsgrenze; 15 Minuten)
TRGS	= Technische Regeln für Gefahrstoffe
TWA	= Time Weighted Average (zeitgewichteter Durchschnitt; 8 Stunden)
UVCB	= Stoffe mit unbekannter oder variabler Zusammensetzung, komplexe Reaktionsprodukte und biologische Materialien
WGK	= Wassergefährdungsklasse
PBT	= persistent, bioakkumulierend, toxisch
vPvB	= sehr persistent und sehr bioakkumulierend
LGK	= Lagerklasse gemäß TRGS 510
LC ₅₀	= Median lethal concentration for 50% of the animal test population
LD ₅₀	= Median lethal dose for 50% of the animal test population through exposure via inhalation
DNEL	= Derived No Effect Concentration
PNEC	= Predicted No Effect Concentration
dw	= dry weight
fw	= fresh water
mw	= marine water
or	= occasional release

Note: The information in this MSDS is based on our current knowledge and experience. These data is not a guarantee of the properties of the product. The use of the product for other use than intended can be dangerous. Data contained in this MSDS does not release the user from the obligation to inform themselves about current regulations and apply them to his work. He has to bear the sole responsibility for the precautions required when using this product.