Safety Data Sheet

According to regulations in the United Kingdom of Great Britain & Northern Ireland

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

1.1. Product identifier

Substance name: **Unleaded Gasoline with Ethanol**

Code: 815856

MARPOL Annex I Category : Gasoline and Spirits

UK REACH Registration Number: UK-01-4615601157-2-0012

Index Number: 649-378-00-4

Issue date: 08-Sep-2026

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

Relevant identified uses: Fuel for spark ignition piston engines - **NOT** recommended for aviation piston engines

Uses advised against: Uses other than those covered by the exposure scenarios appended to this Safety Data Sheet are not supported.

1.3. Details of the supplier of the safety data sheet

Distributor/Supplier:

Rix Petroleum Limited
2 Humber Quays, Wellington Street West
Hull, HU1 2BN, United Kingdom
Telephone: 01482 224422 Email: sales@rix.co.uk

Manufacturer:

Phillips 66 Ltd, Humber Refinery
South Killingholme, North Lincolnshire DN40 3DW, UK

1.4. Emergency telephone number

CHEMTREC Global +1 703 527 3887
CHEMTREC UK +(44)-870-8200418

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

H224 -- Flammable liquids -- Category 1
H304 -- Aspiration Hazard -- Category 1
H315 -- Skin corrosion/irritation -- Category 2
H336 -- Specific target organ toxicity (single exposure) -- Category 3 (Central Nervous System (CNS))
H340 -- Germ cell mutagenicity -- Category 1B
H350 -- Carcinogenicity -- Category 1A
H361d -- Reproductive toxicity -- Category 2
H411 -- Hazardous to the aquatic environment, chronic toxicity -- Category 2

2.2. Label elements



DANGER

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
P201 - Obtain special instructions before use
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P273 - Avoid release to the environment

P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P331 - Do NOT induce vomiting
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

2.3. Other hazards

Electrostatic charge may be generated during pumping and other operations
Does not meet the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent, very bioaccumulative (vPvB) substances.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical name	Concentration[1]	EINECS	REACH Reg. No
Gasoline 86290-81-5	>60	289-220-8	UK-01-4615601157-2
Naphtha (petroleum), light catalytic cracked sweetened 92045-59-5	0-30	295-441-0	UK-01-6371395223-0
Toluene 108-88-3	4-23	203-625-9	---
Ethyl alcohol 64-17-5	≤10	200-578-6	UK-01-8186404962-2
Methyl alcohol 67-56-1	<3	200-659-6	---
Hexane 110-54-3	<2	203-777-6	---
Benzene 71-43-2	<1	200-753-7	---

Chemical name	Classification[2]	M-Factor/ATE/SCL
Gasoline 86290-81-5	Flam. Liq. 1, H224 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Muta. 1B, H340 Carc. 1A, H350 Repr. 2, H361fd Aquatic Chronic 2, H411	---
Naphtha (petroleum), light catalytic cracked sweetened 92045-59-5	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Muta. 1B, H340 Carc. 1A, H350 Repr. 2, H361fd Aquatic Chronic 2, H411	---
Toluene 108-88-3	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Repr. 2, H361d STOT RE 1, H372	---
Ethyl alcohol 64-17-5	Flam. Liq. 2, H225	---
Methyl alcohol 67-56-1	Flam. Liq. 2 (H225) Acute Tox. 3 (H301) Acute Tox. 3 (H311)	Oral ATE: 50-300 mg/kg Dermal ATE: 200-1000 mg/kg Inhalation ATE: 4 mg/L

	Acute Tox. 3 (H331) STOT SE 1 (H370)	STOT SE 1; H370: C>=10% STOT SE 2; H371: 3%<=C<10%;
Hexane 110-54-3	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Repr. 2, H361f STOT RE 1, H372 Aquatic Chronic 2, H411	---
Benzene 71-43-2	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 1B, H340 Carc. 1A, H350 STOT RE 1, H372	---

[1] All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
See Section 11 for more information
Full text of H-Statements referred to under section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

Eye Contact: If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

Skin Contact: Remove contaminated shoes and clothing, and flush affected area(s) with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops, seek medical attention. Wash contaminated clothing before reuse. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician. (see Note to Physician)

Inhalation: If respiratory symptoms develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If breathing is difficult, oxygen or artificial respiration should be administered by qualified personnel. If symptoms persist, seek medical attention.

Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious and vomiting, place on the left side with the head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention.

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

Effects of overexposure can include slight irritation of the respiratory tract, nausea, vomiting, and signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue). Continued exposure to high concentrations can result in vomiting, cardiac irregularities and sudden loss of consciousness. Prolonged or repeated contact may dry skin and cause irritation.

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

Notes to Physician: When using high-pressure equipment, injection of product under the skin can occur. In this case, the casualty should be sent immediately to the hospital. Do not wait for symptoms to develop. High-pressure hydrocarbon injection injuries may produce substantial necrosis of underlying tissue despite an innocuous appearing external wound. These injuries often require extensive emergency surgical debridement and all injuries should be evaluated by a specialist in order to assess the extent of injury. Early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents (e.g., in enclosed spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe for the development of cardiac arrhythmias.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Dry chemical, carbon dioxide, or foam is recommended. Water spray is recommended to cool or protect exposed materials or

structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters.

5.2. Special hazards arising from the substance or mixture

Unusual Fire & Explosion Hazards: Extremely flammable. This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe). Vapours may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapour/air explosion hazard indoors, in confined spaces, outdoors, or in sewers. This product will float and can be reignited on surface water. Vapours are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire.

Hazardous Combustion Products: Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of nitrogen and sulphur may also be formed.

5.3. Special protective actions for fire-fighters

For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapours and to protect personnel. Avoid spreading burning liquid with water used for cooling purposes. Cool equipment exposed to fire with water, if it can be done safely.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Extremely flammable. Spillages of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so. The use of explosion-proof electrical equipment is recommended. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorised personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

6.2. Environmental precautions

Stop and contain spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorised drainage systems, and natural waterways. Use foam on spills to minimise vapours. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard.

6.3. Methods and material for containment and cleaning up

Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Use non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product. Do not breathe vapour or mist. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8).

Extremely flammable. Open container slowly to relieve any pressure. Electrostatic charge may accumulate and create a hazardous condition when handling or processing this material. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. The use of explosion-proof electrical equipment is recommended and may be required (see appropriate fire codes for specific bonding/grounding requirements). Do

not enter confined spaces such as tanks or pits without following proper entry procedures. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames. May vaporize easily at ambient temperatures. The vapour is heavier than air and may create an explosive mixture of vapor and air. Beware of accumulation in confined spaces and low lying areas.

High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.

For use as a motor fuel only. Do not use as a solvent due to its flammable and potentially toxic properties. Siphoning by mouth can result in lung aspiration which can be harmful or fatal.

The use of hydrocarbon fuel in an area without adequate ventilation may result in hazardous levels of incomplete combustion products (e.g. carbon monoxide, oxides of sulphur and nitrogen, benzene and other hydrocarbons) and/or dangerously low oxygen levels.

7.2. Conditions for safe storage, including any incompatibilities

Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Store only in approved containers. Post area "No Smoking or Open Flame." Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

Portable Containers: Static electricity may ignite gasoline vapours when filling portable containers. To avoid static buildup do not use a nozzle lock open device. Use only approved containers for the storage of gasoline. Place the container on the ground before filling. Keep the nozzle in contact with the container during filling. Do not fill any portable container in or on a vehicle or marine craft.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to appropriate guidance pertaining to cleaning, repairing, welding, or other contemplated operations. Outdoor or detached storage is preferred. Indoor storage should meet Country or Committee standards and appropriate fire codes.

7.3. Specific end use(s)

Refer to supplemental exposure scenarios if attached.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Occupational Exposure Limits:

Chemical name	ACGIH TLV	Ireland	United Kingdom	Phillips 66
Gasoline	TWA: 300 ppm STEL: 500 ppm	TWA: 300 ppm STEL: 500 ppm	-	TWA: 450 mg/m³ STEL: 1100 mg/m³ Skin (as THC)
Naphtha (petroleum), light catalytic cracked sweetened	-	-	-	TWA: 450 mg/m³ STEL: 1100 mg/m³ Skin (as THC)
Toluene	TWA: 20 ppm pOt	TWA: 192 mg/m³ TWA: 50 ppm STEL: 384 mg/m³ STEL: 100 ppm pSk	TWA: 50 ppm TWA: 191 mg/m³ STEL: 100 ppm STEL: 384 mg/m³ Sk	TWA: 20 ppm
Ethyl alcohol	STEL: 1000 ppm	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1920 mg/m³	-
Methyl alcohol	TWA: 200 ppm	TWA: 200 ppm	TWA: 200 ppm	TWA: 200 ppm

Chemical name	ACGIH TLV	Ireland	United Kingdom	Phillips 66
	STEL: 250 ppm pSk	TWA: 260 mg/m³ STEL: 600 ppm STEL: 780 mg/m³ pSk	TWA: 266 mg/m³ STEL: 250 ppm STEL: 333 mg/m³ Sk	STEL: 250 ppm Skin
Hexane	TWA: 50 ppm pSk	TWA: 20 ppm TWA: 72 mg/m³ STEL: 60 ppm STEL: 216 mg/m³ pSk	TWA: 20 ppm TWA: 72 mg/m³	TWA: 50 ppm Skin
Benzene	TWA: 0.02 ppm pSk	TWA: 1 ppm TWA: 3.25 mg/m³ STEL: 3 ppm STEL: 9.75 mg/m³ Carcinogen pSk	TWA: 1 ppm TWA: 3.25 mg/m³ Carcinogen Sk	TWA: 0.5 ppm STEL: 2.5 ppm Skin Carcinogen

STEL = Short Term Exposure Limit (15 minutes); TWA = Time Weighted Average (8 hours); - = No Occupational Exposure Limit. Local regulations may be more stringent than regional or national requirements.

Biological Limit Values:

Chemical name	ACGIH	United Kingdom
Toluene	Toluene in blood: 0.02 mg/L (prior to last shift of workweek) Toluene in urine: 0.03 mg/L (end of shift) o-Cresol with hydrolysis in urine: 0.3 mg/g creatinine (end of shift)	-
Methyl alcohol	Butyrylcholinesterase activity in plasma: 60 % of baseline (end of shift) Acetylcholinesterase activity in red blood cells: 70 % of baseline (end of shift) Methanol in urine: 15 mg/L (end of shift)	-
Hexane	2,5-Hexanedione without hydrolysis in urine: 0.5 mg/L (end of shift)	-
Benzene	S-Phenylmercapturic acid in urine: 25 µg/g creatinine (end of shift) t,t-Muconic acid in urine: 500 µg/g creatinine (end of shift)	-

- = No Biological Limit Value. Local regulations may be more stringent than regional or national requirements.

Relevant DNEL and PNEC:

Worker Derived No-Effect Level (DNEL)
Inhalation: 3.25 mg/m³ TWA-8hr (DNEL, as benzene)
Dermal: 23.4 mg/kgbw/day (DNEL, as benzene)

Consumer Derived No-Effect Level (DNEL)
Inhalation: Not applicable
Dermal: Not applicable
Ingestion: Not applicable

Environmental Predicted No-Effect Concentration (PNEC): No information available

8.2. Exposure controls

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Eye/Face Protection: The use of eye protection that meets or exceeds EN 166 is recommended to protect against potential eye contact, irritation, or injury. Depending on conditions of use, close fitting eye protection and a face shield may be necessary.

Skin/Hand Protection: The use of gloves impervious to the specific material handled that comply with EN 374 is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. Depending on exposure and use conditions, additional protection may be necessary to prevent skin contact including use of items such as chemical resistant boots, aprons, arm covers, hoods, coveralls, or encapsulated suits. Suggested protective materials: Nitrile rubber.

Respiratory Protection: Where there is potential for airborne exposure above the exposure limit an approved air purifying respirator equipped with Type A, organic gases and vapour filters (as specified by the manufacturer) may be used.

A respiratory protection programme that follows recommendations for the selection, use, care and maintenance of respiratory protective devices in EN 529:2005 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health.

Other Protective Equipment: Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse.

Environmental Exposure Controls: Refer to Sections 6, 7, 12 and 13.

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Data represent typical values and are not intended to be specifications. N/A = Not Applicable; N/D = Not Determined

Physical State:	Liquid
Colour:	Clear, pale yellow (may be dyed various colours); Clear and bright
Odour:	Gasoline
Melting / freezing point:	N/D
Boiling point (or initial boiling point or boiling range):	71.6 - 410 °F / 22 - 210 °C
Flammability (solid, gas):	N/A
Upper Explosive Limits (vol % in air):	7.6
Lower Explosive Limits (vol % in air):	1.3
Flash point:	-40 °F / -40 °C
Method:	Tag Closed Cup (TCC), ASTM D56
Autoignition temperature:	842 °F / 450 °C
Decomposition temperature:	N/D
pH:	No data available
Kinematic Viscosity:	0.5-1.5 mm²/s @ 20°C
Solubility:	Soluble in water : 0.01g/L
Partition coefficient n-octanol /water (log Kow):	N/D
Vapour pressure:	45-100 kPa @20°C
Relative vapour density:	>1
Relative density:	720.0-775.0 kg/m³ @15°C
Particle characteristics:	N/A

9.2. Other information

9.2.1. Information with regards to physical hazard classes

No information available

9.2.2. Other safety characteristics

Evaporation Rate (nBuAc=1):	10-11
Bulk Density:	N/D
Pour point:	N/D
Explosive properties:	N/D
Oxidising properties:	N/D

SECTION 10: Stability and reactivity

10.1. Reactivity Not chemically reactive.
10.2. Chemical stability Stable under normal ambient and anticipated conditions of use.
10.3. Possibility of hazardous reactions Hazardous reactions not anticipated.
10.4. Conditions to avoid Avoid high temperatures and all sources of ignition. Prevent vapour accumulation.
10.5. Incompatible materials Avoid contact with strong oxidizing agents and strong reducing agents.
10.6. Hazardous decomposition products Not anticipated under normal conditions of use.

SECTION 11: Toxicological information

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

Likely Routes of Exposure: Inhalation, Ingestion, Eye contact, Skin contact
Aspiration Hazard: May be fatal if swallowed and enters airways.

Acute Oral Toxicity

Product

Classification: Unlikely to be harmful
Oral LD50: > 5 g/kg (estimated)
Remarks: Based on components

Chemical name	Oral LD50	Species	Method	Remarks
Gasoline	> 5 g/kg	Rat	OECD 401	
Naphtha (petroleum), light catalytic cracked sweetened	> 5 g/kg	Rat	Similar to OECD 401	Based on similar material
Toluene	5.6 g/kg	Rat	Other: EU Method B.1	
Ethyl alcohol	10.5 g/kg	Rat	OECD 401	
Methyl alcohol	100 mg/kg		Other: human experience	Estimated
Hexane	16 g/kg	Rat	Similar to OECD 401	
Benzene	3.3 g/kg	Rat	Similar to OECD 401	

Acute Dermal Toxicity

Product

Classification: Unlikely to be harmful
Dermal LD50: > 2 g/kg (estimated)
Remarks: Based on components

Chemical name	Dermal LD50	Species	Method	Remarks
Gasoline	> 2 g/kg	Rabbit	OECD 402	
Naphtha (petroleum), light catalytic cracked sweetened	> 2 g/kg	Rabbit	Similar to OECD 402	Based on similar material
Toluene	12.3 g/kg	Rabbit	Other: Pre-guideline	
Ethyl alcohol	> 20 g/kg	Rabbit	Other: Non-guideline	
Methyl alcohol	300 mg/kg			Estimated
Hexane	3.35 g/kg	Rabbit	Similar to	Based on similar material

			OECD 402	
Benzene	> 8.26 g/kg	Rabbit Guinea pig	Other: 21 CFR 191.10	

Acute Inhalation Toxicity

Product

Classification: Expected to have a low degree of toxicity by inhalation
Inhalation LC50 : >5.6 mg/L (vapour, estimated)
Remarks: Based on components

Chemical name	Inhalation LC50	Species	Method	Remarks
Gasoline	> 5.6 mg/L	Rat	OECD 403	
Naphtha (petroleum), light catalytic cracked sweetened	> 5.6 mg/L	Rat	Similar to OECD 403	Vapour, Based on similar material
Toluene	28.1 mg/L	Rat	OECD 403	
Ethyl alcohol	117 mg/L	Rat	Similar to OECD 403	Vapour
Methyl alcohol	3 mg/L			Estimated, Vapour
Hexane	73860 ppm (estimated)	Rat	Similar to OECD 403	Based on similar material
Benzene	43.7 mg/L	Rat	Similar to OECD 403	

Serious Eye Damage/Irritation

Product

Classification: Causes mild eye irritation

Chemical name	Classification	SCL	Species	Method	Remarks
Gasoline	Causes mild eye irritation.		Rabbit	OECD 405	
Naphtha (petroleum), light catalytic cracked sweetened	Causes mild eye irritation.		Rabbit	Similar to OECD 405	Based on similar material
Toluene	Causes mild eye irritation.		Rabbit	OECD 405	
Ethyl alcohol	Causes mild eye irritation.		Rabbit	OECD 405	
Methyl alcohol	Causes mild eye irritation.		Rabbit	Other: Non-guideline	
Hexane	Causes mild eye irritation.		Rabbit	Similar to OECD 405	Based on similar material
Benzene	Causes serious eye irritation		Rabbit	Other: Pre-guideline method	

Skin Corrosion/Irritation

Product

Classification: Causes skin irritation
Additional Information: Repeated exposure may cause skin dryness or cracking

Chemical name	Classification	SCL	Species	Method	Remarks
Gasoline	Causes skin irritation		Rabbit	OECD 404	
Naphtha (petroleum), light catalytic cracked sweetened	Causes skin irritation		Rabbit	OECD 404	Based on similar material
Toluene	Causes skin irritation		Rabbit	Other: EU Method B.4	
Ethyl alcohol	Not known to be irritating.		Rabbit	OECD 404	
Methyl alcohol	Not known to be irritating.		Rabbit	Other: Non-guideline	
Hexane	Causes skin irritation		Rabbit	Similar to	Based on similar material

				OECD 404	
Benzene	Causes skin irritation		Rabbit	Similar to OECD 404	

Respiratory Sensitisation

Product

Classification: No information available on the mixture, however none of the components have been classified for respiratory sensitisation (or are below the concentration threshold for classification)

Chemical name	Respiratory Sensitisation:	SCL	Species	Method	Remarks
Gasoline	Not expected to be a respiratory sensitizer				
Naphtha (petroleum), light catalytic cracked sweetened	Not expected to be a respiratory sensitizer				
Toluene	No information available				
Ethyl alcohol	Not expected to be a respiratory sensitizer				
Methyl alcohol	No information available				
Hexane	No information available				
Benzene	No information available				

Skin Sensitisation

Product

Classification: Not expected to be a skin sensitizer

Chemical name	Skin Sensitisation	SCL	Species	Method	Remarks
Gasoline	Not expected to be a skin sensitizer		Guinea pig	OECD 406	
Naphtha (petroleum), light catalytic cracked sweetened	Not expected to be a skin sensitizer		Guinea pig	Similar to OECD 406	Based on similar material
Toluene	Not known to be a skin sensitizer		Guinea pig	Other: EU Method B.6	
Ethyl alcohol	Not expected to be a skin sensitizer		Guinea pig	Similar to OECD 406	Based on similar material
Methyl alcohol	Not expected to be a skin sensitizer		Guinea pig	Similar to OECD 406	
Hexane	Not expected to be a skin sensitizer		Mouse	Similar to OECD 429	
Benzene	Not expected to be a skin sensitizer		Mouse Guinea pig	Similar to OECD 406	

Specific target organ toxicity - Single exposure

Product

Classification: May cause drowsiness and dizziness
Additional Information: Based on component information.

Chemical name	Specific target organ toxicity - Single exposure	Target Organs
Gasoline	May cause drowsiness and dizziness.	
Naphtha (petroleum), light catalytic cracked sweetened	May cause drowsiness and dizziness.	
Toluene	May cause drowsiness and dizziness.	Central Nervous System (CNS)
Ethyl alcohol	Not expected to cause organ effects from single exposure.	
Methyl alcohol	Causes damage to organs (H370: C ≥ 10 %); May cause damage to organs (H371: 3 % ≤ C < 10 %)	optic nerve Central Nervous System (CNS)
Hexane	May cause drowsiness and dizziness.	Central Nervous System (CNS)
Benzene	Not expected to cause organ effects from single exposure.	

Specific target organ toxicity - Repeated exposure

Product

Classification: Not expected to cause organ effects from repeated exposure

Chemical name	Specific target organ toxicity - Repeated exposure	SCL	Method	Target Organs
Gasoline	Not expected to cause organ effects from repeated exposure			
Naphtha (petroleum), light catalytic cracked sweetened	Not expected to cause organ effects from repeated exposure		Similar to OECD 410 OECD 412 OECD 413 OECD 453	
Toluene	Causes damage to organs through prolonged or repeated exposure		Other: Human reports	Central Nervous System (CNS)
Ethyl alcohol	Not expected to cause organ effects from repeated exposure		Similar to OECD 408	
Methyl alcohol	Not expected to cause organ effects from repeated exposure		Similar to OECD 408	
Hexane	Causes damage to organs through prolonged or repeated exposure		Other: Non-guideline	Nervous System
Benzene	Causes damage to organs through prolonged or repeated exposure		OECD 408	bone marrow

Additional Information

Gasoline

Two year inhalation studies of wholly vaporized unleaded gasoline, and 90 days studies of various petroleum naphthas, did not produce significant target organ toxicity in laboratory animals. Nephropathy in male rats, characterized by the accumulation of alpha-2-u- globulin in epithelial cells of the proximal tubules was observed, however follow-up studies suggest that these changes are unique to the male rat.

Naphtha (petroleum), light catalytic cracked sweetened

Two year inhalation studies of wholly vaporized unleaded gasoline, and 90 days studies of various petroleum naphthas, did not produce significant target organ toxicity in laboratory animals. Nephropathy in male rats, characterized by the accumulation of alpha-2-u- globulin in epithelial cells of the proximal tubules was observed, however follow-up studies suggest that these changes are unique to the male rat.

Toluene

Epidemiology studies suggest that chronic occupational overexposure to toluene may damage colour vision. Subchronic and chronic inhalation studies with toluene produced kidney and liver damage, hearing loss and central nervous system (brain) damage in laboratory animals. Intentional misuse by deliberate inhalation of high concentrations of toluene has been shown to cause liver, kidney, and central nervous system damage, including hearing loss and visual disturbances.

Ethyl alcohol

Chronic alcoholism has been associated with damage to the liver in humans (e.g., cirrhosis of the liver). Excessive consumption of alcoholic beverages has also been associated with adverse effects on the central nervous system, digestive system and cardiovascular system.

Methyl alcohol

Ingestion of methanol can produce visual disturbances characterized by dilated, unreactive pupils, dim vision, and ocular lesions which may result in blindness. Pancreatitis, as defined by elevated serum amylase, occurs commonly and hemorrhagic pancreatitis has also been reported. Effects on the liver, kidney and heart have been reported but are not commonly associated with overexposure to methanol.

Hexane

Excessive exposure to n-hexane can result in peripheral neuropathies. The initial symptoms are symmetrical sensory numbness and paresthesias of distal portions of the extremities. Motor weakness is typically observed in muscles of the toes and fingers but may also involve muscles of the arms, thighs and forearms. The onset of these symptoms may be delayed for

several months to a year after the beginning of exposure. The neurotoxic properties of n-hexane are potentiated by exposure to methyl ethyl ketone and methyl isobutyl ketone.

Benzene

Prolonged or repeated exposures to benzene vapours can cause damage to the blood and blood forming organs, including disorders like leukopenia, thrombocytopenia, and aplastic anaemia.

Carcinogenicity

Product

Classification: May cause cancer

Additional Information (Carcinogenicity): Based on component information.

Chemical name	Classification	Method
Gasoline	May cause cancer	Epidemiological studies
Naphtha (petroleum), light catalytic cracked sweetened	May cause cancer	Epidemiological studies
Toluene	Not known to cause cancer	Similar to OECD 453
Ethyl alcohol	Not expected to cause cancer.	Similar to OECD 451
Methyl alcohol	Inadequate information available.	
Hexane	Inadequate information available.	OECD 451
Benzene	May cause cancer	Epidemiological studies

Additional Information

Gasoline

Automotive gasoline has been classified by the International Agency for Research on Cancer (IARC) as a known human carcinogen (Group 1).

Naphtha (petroleum), light catalytic cracked sweetened

Automotive gasoline has been classified by the International Agency for Research on Cancer (IARC) as a known human carcinogen (Group 1).

Toluene

Exposure of rats and mice to toluene at concentrations ranging from 120-1200 ppm for two years did not demonstrate evidence of carcinogenicity. Toluene has not been listed as a carcinogen by IARC.

Ethyl alcohol

Ingestion of alcoholic beverages has been classified by IARC as "carcinogenic to humans" (Group 1). Occupational exposures to ethanol and exposures other than by ingestion (i.e., dermal and inhalation) have not been associated with cancer in humans.

Benzene

Benzene is an animal carcinogen and is known to produce acute myelogenous leukaemia (a form of cancer) in humans. Benzene has been identified as a human carcinogen by IARC, the US National Toxicology Programme and the US-Occupational Safety and Health Administration.

Reproductive/Developmental/Teratogenic effects

Product

Classification: Suspected of damaging the unborn child

Additional Information (Reproductive toxicity): Based on component information.

Naphtha (petroleum), light catalytic cracked sweetened (92045-59-5)			
Endpoint type	**Method**	**Result**	**Remarks**
Effects on fertility Effects on fetal development	OECD 421	Based on available data, the classification criteria are not met	
Effects on fetal development	OECD 414	Based on available data, the classification criteria are not met	
Effects on fertility Effects on fetal development	OECD 416	Based on available data, the classification criteria are not met	

Toluene (108-88-3)			
Endpoint type	**Method**	**Result**	**Remarks**
Effects on fertility	Other: Non-guideline	Based on available data, the	

		classification criteria are not met	
Effects on fetal development	OECD 414	Suspected of damaging the unborn child	

Ethyl alcohol (64-17-5)			
Endpoint type	**Method**	**Result**	**Remarks**
Effects on fertility Effects on fetal development	Similar to OECD 416	Based on available data, the classification criteria are not met	
Effects on fetal development	Similar to OECD 414	Based on available data, the classification criteria are not met	

Hexane (110-54-3)			
Endpoint type	**Method**	**Result**	**Remarks**
Effects on fertility	Other: Non-guideline	Suspected of damaging fertility	
Effects on fetal development	Other: Non-guideline	Based on available data, the classification criteria are not met	

Benzene (71-43-2)			
Endpoint type	**Method**	**Result**	**Remarks**
Effects on fertility Effects on fetal development	OECD 415	Based on available data, the classification criteria are not met	

Additional Information

Gasoline

No evidence of developmental toxicity was found in pregnant laboratory animals (rats and mice) exposed to high vapour concentrations of unleaded gasoline and petroleum naphthas via inhalation. A two-generation reproductive toxicity study of vapour recovery gasoline did not adversely affect reproductive function or offspring survival and development.

Naphtha (petroleum), light catalytic cracked sweetened

No evidence of developmental toxicity was found in pregnant laboratory animals (rats and mice) exposed to high vapour concentrations of unleaded gasoline and petroleum naphthas via inhalation. A two-generation reproductive toxicity study of vapour recovery gasoline did not adversely affect reproductive function or offspring survival and development.

Toluene

Exposure to toluene during pregnancy has demonstrated limited evidence of developmental toxicity in laboratory animals. Decreased fetal body weight and increased skeletal variations in both inhalation and oral studies, but only at doses that were maternally toxic. No fetal toxicity was seen at doses that were not maternally toxic. Decreased sperm counts have been observed in male rats in the absence of a reduction in fertility. Toluene has been reported to cause mental or growth retardation in the children of solvent abusers who directly inhale toluene during pregnancy.

Ethyl alcohol

Adverse reproductive effects are not anticipated from workplace inhalation exposure. Excessive consumption of alcoholic beverages during pregnancy has been associated with effects on the developing foetus referred to collectively as the fetal alcohol syndrome. The effects most frequently manifested include psychomotor dysfunction, growth retardation and a characteristic cluster of facial anomalies. It also affects the reproductive system including reduced sperm count and motility and loss of libido in men, abnormal menstrual function, and decreased plasma estradiol and progesterone levels in women.

Hexane

Prolonged exposure to high concentrations of n-hexane (>1,000 ppm) resulted in decreased sperm count and degenerative changes in the testes of rats but not those of mice.

Benzene

Some studies in occupationally exposed women have suggested benzene exposure increased risk of miscarriage and stillbirth and decreased birth weight and gestational age. The size of the effects detected in these studies was small, and ascertainment of exposure and outcome in some cases relied on self-reports, which may limit the reliability of these results.

Mutagenic effects

Product

Classification: May cause genetic defects
Additional Information (Mutagenicity): Based on component information.

Naphtha (petroleum), light catalytic cracked sweetened (92045-59-5)		
Method	**Result**	**Remarks**
Similar to OECD 476	Negative	Based on similar material
Similar to OECD 479	Negative	Based on similar material
Similar to OECD 471	Negative	Based on similar material
Other: EPA OPPTS 870.5395	Negative	Based on similar material

Toluene (108-88-3)		
Method	**Result**	**Remarks**
Other: EU Method B.13/14	Negative	
Similar to OECD 476	Negative	
Other: in vivo mammalian germ cell study: cytogenicity / chromosome aberration	Negative	

Ethyl alcohol (64-17-5)		
Method	**Result**	**Remarks**
Similar to OECD 471	Negative	
OECD 474	Negative	
Similar to OECD 478	Negative	
Similar to OECD 475	Negative	
Similar to OECD 490	Negative	

Methyl alcohol (67-56-1)		
Method	**Result**	**Remarks**
Similar to OECD 471	Ambiguous	
Similar to OECD 476	Positive	
OECD 471	Negative	
Similar to OECD 471	Negative	
Similar to OECD 474	Negative	
Other: In vivo mammalian chromosome aberration test performed with primary lung cells cultured after inhalation exposure.	Negative	
Other: in vivo chromosome aberration assay	Negative	
Other: in vivo micronucleus assay	Negative	

Hexane (110-54-3)		
Method	**Result**	**Remarks**
Other: Non-guideline, rodent dominant lethal assay	Negative	
Similar to OECD 475	Negative	Based on similar material
Similar to OECD 471	Negative	
Similar to OECD 476	Positive	
OECD 476	Negative	

Benzene (71-43-2)		
Method	**Result**	**Remarks**
OECD 474	Positive	Based on similar material
OECD 471	Negative	Based on similar material
Other: EPA OPPTS 870.5375	Positive	Based on similar material

Additional Information

Benzene

Benzene exposure has resulted in chromosomal aberrations in human lymphocytes and animal bone marrow cells. Exposure

has also been associated with chromosomal aberrations in sperm cells in human and animal studies.

11.2 Information on other hazards
11.2.1 Endocrine disrupting properties

The currently available information does not indicate that this substance has endocrine disrupting properties as defined by the criteria set out in Section B of Regulation (EU) No 2017/2100.
11.2.2 Other Information

None known

SECTION 12: Ecological information

12.1. Toxicity
Acute aquatic toxicity studies on samples of gasoline and naphtha streams show acute toxicity values greater than 1 mg/L and mostly in the range 1-100 mg/L. These tests were carried out on water accommodated fractions, in closed systems to prevent evaporative loss. Results are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon composition. These substances should be regarded as toxic to aquatic organisms, with the potential to cause long term adverse effects in the aquatic environment.
12.2. Persistence and degradability
The hydrocarbons in this material are not readily biodegradable but are regarded as inherently biodegradable since their hydrocarbon components can be degraded by microorganisms.
Persistence per IOPC Fund definition: Non-Persistent
12.3. Bioaccumulative potential
Log Kow values measured for the hydrocarbon components of this material range from 3 to greater than 6 and therefore are regarded as having the potential to bioaccumulate. In practise, metabolic processes or physical properties may prevent this effect or limit bioavailability.
12.4. Mobility in soil
On release to water, hydrocarbons will float on the surface and since they are sparingly soluble, the only significant loss is volatilisation to air. In air, these hydrocarbons are photodegraded by reaction with hydroxyl radicals with half lives varying from 6.5 days for benzene to 0.5 days for n-dodecane.
12.5. Results of PBT and vPvB assessment
Not a PBT or vPvB substance.
12.6 Endocrine disrupting properties
This product does not contain any known or suspected endocrine disruptors
12.7 Other adverse effects
Other adverse effects: None anticipated.
PMT or vPvM properties: Based on available data, the classification criteria are not met.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
European Waste Code: 13 07 02* petrol

This material, if discarded as produced, would be considered as hazardous waste pursuant to Directive 2008/98/EC on hazardous waste, and subject to the provisions of that Directive unless Article 1(5) of that Directive applies.
This code has been assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use. Waste generators/producers are responsible for assessing the actual process used when generating the waste and it's contaminants in order to assign the proper waste disposal code.
Disposal must be in accordance with Directive 2008/98/EC and other applicable national or regional provisions, and based upon material characteristics at time of disposal. For incineration of waste, follow Directive 2000/76/EC. For landfill of waste, follow Directive 1999/31/EC. Product is suitable for burning in an enclosed controlled burner for fuel value if >5000 BTU, or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products. Follow Directive 2000/76/EC.
Empty Containers: Container contents should be completely used and containers emptied prior to discard. Empty drums should be properly sealed and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with applicable regulations.

SECTION 14: Transport information

14.1. UN number
UN1203
14.2. UN proper shipping name
Gasoline

14.3. Transport hazard class(es)
3

14.4. Packing group
II

14.5. Environmental hazards
Marine pollutant - Environmentally Hazardous

14.6. Special precautions for user
If transported in bulk by marine vessel in international waters, product is being carried under the scope of MARPOL Annex I.

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
EC 1272/2008 - Classification, labelling and packaging of substances and mixtures
EN166:2002 Eye Protection
EN 529:2005 Respiratory Protective devices
BS EN 374-1:2016 Protective gloves against chemicals and micro-organisms
Workplace Exposure Limits, EH40/2005, Control of Substances Hazardous to Health
Occupational Exposure Limits, Technical Rules for Dangerous Substances
Occupational Exposure Limits, Health and Safety Authority
Directive 2008/98/EC (Waste Framework Directive)
Directive 2000/76/EC on incineration of waste
Directive 1999/31/EC on landfill of waste

Export Rating: NLR (No Licence Required)
UK - GB REACH - Candidate List of Substances of Very High Concern (SVHC) for Authorisation: This product does not contain candidate substances of very high concern at a concentration >=0.1%.

15.2. Chemical safety assessment
A chemical safety assessment has been carried out for the substance/mixture.

SECTION 16: Other information

Issue date:	08-Sep-2026
Status:	FINAL
Previous Issue Date:	28-Oct-2025
Reason for Revision:	Occupational Exposure Limits Regulatory information
SDS Number:	**815856 -UKDS- BE**

List of Relevant Hazard Statements:
H224 - Extremely flammable liquid and vapour
H225 - Highly flammable liquid and vapour
H301 - Toxic if swallowed
H304 - May be fatal if swallowed and enters airways

H311 - Toxic in contact with skin
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H331 - Toxic if inhaled
H336 - May cause drowsiness or dizziness
H340 - May cause genetic defects
H350 - May cause cancer
H361d - Suspected of damaging the unborn child
H361f - Suspected of damaging fertility
H370 - Causes damage to organs
H372 - Causes damage to organs through prolonged or repeated exposure
H373 - May cause damage to organs through prolonged or repeated exposure
H411 - Toxic to aquatic life with long lasting effects

Regulatory Basis of Classification

Classification	Regulatory Basis
H224 -- Flammable liquids -- Category 1	On basis of test data
H304 -- Aspiration Hazard -- Category 1	On basis of test data
H315 -- Skin corrosion/irritation -- Category 2	Based on component information.
H336 -- Specific target organ toxicity (single exposure) -- Category 3 (Central Nervous System (CNS))	Based on component information.
H340 -- Germ cell mutagenicity -- Category 1B	Based on component information.
H350 -- Carcinogenicity -- Category 1A	Based on similar material
H361d -- Reproductive toxicity -- Category 2	Based on component information.
H411 -- Hazardous to the aquatic environment, chronic toxicity -- Category 2	Based on component information.

Key literature references and sources for data:
Information used includes one or more of the following: results from internal company data, supplier toxicology studies, CONCAWE Product Dossiers and other publicly available resources.
Guide to Abbreviations:
ACGIH = American Conference of Governmental Industrial Hygienists; ADR = Agreement on Dangerous Goods by Road; BMGV = Biological Monitoring Guidance Value; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA = [US] Environmental Protection Agency; Germany-TRGS = Technical Rules for Dangerous Substances; IARC = International Agency for Research on Cancer; ICAO/IATA = International Civil Aviation Organisation / International Air Transport Association; INSHT = National Institute for Health and Safety at Work; IMDG = International Maritime Dangerous Goods; Irland-HSA = Ireland's National Health and Safety Authority; LEL = Lower Explosive Limit; MARPOL = Marine Pollution; N/A = Not Applicable; N/D = Not Determined; NTP = [US] National Toxicology Programme; PBT = Persistent, Bioaccumulative and Toxic; RID = Regulations Concerning the International Transport of Dangerous Goods by Rail; STEL = Short Term Exposure Limit; TLV = Threshold Limit Value; TRGS 903 = Technical rules for hazardous substances; TWA = Time Weighted Average; UEL = Upper Explosive Limit; UK-EH40 = United Kingdom EH40/2005 OEL; vPvB = very Persistent, very Bioaccumulative
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