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

1.1 Product identifier

Trade name	:	SH ULG 95 1000ppmS 0 Udy Umk V-Power OM
Product code	:	002D6417

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

Use of the Substance/Mixture	:	Fuel for spark ignition engines designed to run on unleaded fuel.
Uses advised against	:	This product must not be used in applications other than those listed in Section 1 without first seeking the advice of the supplier., This product is not to be used as a solvent or cleaning agent; for lighting or brightening fires; as a skin cleanser., This product is designed only to suit automotive applications and no provision is made for the requirements of aviation applications.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier	:	**Shell Oman Marketing Company SAOG** Mina Al Fahal PO BOX 38 PC116 Muscat Sultanate of Oman
Telephone	:	(+968) 24570100
Telefax	:	(+968) 24570121
Email Contact for Safety Data Sheet	:	If you have any enquiries about the content of this SDS please email fuelSDS@shell.com

1.4 Emergency telephone number

: (+968) 99231647

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 1	H224: Extremely flammable liquid and vapour.
Skin irritation, Category 2	H315: Causes skin irritation.
Carcinogenicity, Category 1B	H350: May cause cancer.
Germ cell mutagenicity, Category 1B	H340: May cause genetic defects.
Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.

Specific target organ toxicity - single exposure, Category 3, Narcotic effects	H336: May cause drowsiness or dizziness.
Reproductive toxicity, Category 2	H361: Suspected of damaging fertility or the unborn child.
Acute aquatic toxicity, Category 2	H401: Toxic to aquatic life.
Chronic aquatic toxicity, Category 2	H411: Toxic to aquatic life with long lasting effects.

Classification (67/548/EEC, 1999/45/EC)

F+: Extremely flammable	R12: Extremely flammable.
Carc.Cat.2: Carcinogenic Category 2	R45: May cause cancer.
Mut.Cat.2: Mutagenic Category 2	R46: May cause heritable genetic damage.
Xi: Irritant	R38: Irritating to skin.
Xn: Harmful	R63: Possible risk of harm to the unborn child.
Xn: Harmful	R65: Harmful: may cause lung damage if swallowed.
	R67: Vapours may cause drowsiness and dizziness.
N: Dangerous for the environment	R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements :

	PHYSICAL HAZARDS:
H224	Extremely flammable liquid and vapour.
	HEALTH HAZARDS:
H315	Causes skin irritation.
H340	May cause genetic defects.
H350	May cause cancer.
H304	May be fatal if swallowed and enters airways.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
	ENVIRONMENTAL HAZARDS:
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements	:	**Prevention:**	
		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.
		Response:	
		P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
		P331	Do NOT induce vomiting.
		Disposal:	
		P501	Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

2.3 Other hazards

This mixture does not contain any REACH registered substances that are assessed to be a PBT or a vPvB.
Moderately irritating to eyes.
Slightly irritating to respiratory system.
A component or components of this material may cause cancer.
This product contains benzene which may cause leukaemia (AML - acute myelogenous leukaemia).
May cause MDS (Myelodysplastic Syndrome).
This material is a static accumulator.
Even with proper grounding and bonding, this material can still accumulate an electrostatic charge.
If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur.
Liquid evaporates quickly and can ignite leading to a flash fire, or an explosion in a confined space.
Ether oxygenates are significantly more water soluble and less biodegradable than benzene, toluene, ethyl benzene and xylenes (BTEX)

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Complex mixture of hydrocarbons consisting of paraffins, cycloparaffins, aromatic and olefinic hydrocarbons with carbon numbers predominantly in the C4 to C12 range.
Contains oxygenated hydrocarbons which may include methyl tertiary butyl ether (MTBE) and other ethers.
May also contain several additives at <0.1% v/v each.

Hazardous components

Chemical name	CAS-No. EC-No.	Classification	Concentration [%]
Gasoline, low boiling point naphtha	86290-81-5 289-220-8	Flam. Liq.1; H224 Asp. Tox.1; H304 Muta.1B; H340 Carc.1B; H350	95 - 98

		Skin Irrit.2; H315 STOT SE3; H336 Repr.2; H361 Aquatic Acute2; H401 Aquatic Chronic2; H411	
tert-butyl methyl ether	1634-04-4 216-653-1	Flam. Liq.2; H225 2; H315	0 - 15
methanol	67-56-1 200-659-6	Flam. Liq.2; H225 Acute Tox.3; H331 Acute Tox.3; H311 Acute Tox.3; H301 STOT SE1; H370	0 - 0,1

Remarks : Dyes and markers can be used to indicate tax status and prevent fraud.

For explanation of abbreviations see section 16.

Further information

Contains:

Chemical name	Identification number	Concentration [%]
benzene	71-43-2200-753-7	0 - 7
cumene	98-82-8202-704-5	0 - 0,1
cyclohexane	110-82-7203-806-2	0 - 0,1
Ethylbenzene	100-41-4202-849-4	0 - 5
Naphthalene	91-20-3202-049-5	0 - 0,1
n-Hexane	110-54-3203-777-6	0 - 5
toluene	108-88-3203-625-9	0 - 5
Trimethylbenzene (all isomers)	25551-13-7247-099-9	0 - 2
Xylene, mixed isomers	1330-20-7215-535-7	0 - 10

SECTION 4: First aid measures

4.1 Description of first aid measures

Protection of first-aiders : When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.

If inhaled : Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

In case of skin contact : Remove contaminated clothing. Immediately flush skin with large amounts of water for at least 15 minutes, and follow by washing with soap and water if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.
When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the

casualty should be sent immediately to a hospital. Do not wait for symptoms to develop.
Obtain medical attention even in the absence of apparent wounds.

In case of eye contact : Flush eye with copious quantities of water.
Remove contact lenses, if present and easy to do. Continue rinsing.
If persistent irritation occurs, obtain medical attention.

If swallowed : Call emergency number for your location / facility.
If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Skin irritation signs and symptoms may include a burning sensation, redness, or swelling.
Eye irritation signs and symptoms may include a burning sensation and a temporary redness of the eye.
If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever.
The onset of respiratory symptoms may be delayed for several hours after exposure.
Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache and nausea.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.
Consult a Poison Control Centre for guidance.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing media : Do not use direct water jets on the burning product as they could cause a steam explosion and spread of the fire., Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases

(smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Will float and can be reignited on surface water.

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Further information	:	Clear fire area of all non-emergency personnel. If the fire cannot be extinguished the only course of action is to evacuate immediately. Keep adjacent containers cool by spraying with water. If possible remove containers from the danger zone. Prevent fire extinguishing water from contaminating surface water or the ground water system. Contain residual material at affected sites to prevent material from entering drains (sewers), ditches, and waterways. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Do not breathe fumes, vapour. Do not operate electrical equipment. Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Evacuate all personnel. Attempt to disperse the vapour or to direct its flow to a safe location, for example by using fog sprays. Vapour can travel for considerable distances both above and below the ground surface. Underground services (drains, pipelines, cable ducts) can provide preferential flow paths.

6.2 Environmental precautions

Environmental precautions	:	Take measures to minimise the effects on groundwater. Contain residual material at affected sites to prevent material from entering drains (sewers), ditches, and waterways.

Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Do not allow contact with soil, surface or ground water.
Avoid entry into soil.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Take precautionary measures against static discharges.
For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely
For small liquid spills (< 1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.
Avoid contact with skin, eyes and clothing.
Evacuate the area of all non-essential personnel.
Ventilate contaminated area thoroughly.
If contamination of site occurs remediation may require specialist advice.
Take precautionary measures against static discharges.
Ensure electrical continuity by bonding and grounding (earthing) all equipment.
Observe all relevant local and international regulations.

6.4 Reference to other sections

For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet., Notify authorities if any exposure to the general public or the environment occurs or is likely to occur., For guidance on disposal of spilled material see Chapter 13 of this Safety Data Sheet., Local authorities should be advised if significant spillages cannot be contained., Maritime spillages should be dealt with using a Shipboard Oil Pollution Emergency Plan (SOPEP), as required by MARPOL Annex 1 Regulation 26., If contamination of site occurs remediation may require specialist advice. To the extent that this product, including its chemical components (e.g. Methyl tertiary butyl ether) may impact surface or groundwater, appropriate assessment and remediation (if necessary) should be implemented.

SECTION 7: Handling and storage

General Precautions : Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet.
Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Air-dry contaminated clothing in a well-ventilated area before

laundering.
Prevent spillages.
Turn off all battery operated portable electronic devices (examples include: cellular phones, pagers and CD players) before operating gasoline pump.
Contaminated leather articles including shoes cannot be decontaminated and should be destroyed to prevent reuse.
Do not use as a cleaning solvent or other non-motor fuel uses.
Ensure that all local regulations regarding handling and storage facilities are followed.

Vehicle fueling and vehicle workshop areas - Avoid inhalation of vapours and contact with skin, when filling or emptying a vehicle.

7.1 Precautions for safe handling

Advice on safe handling : Avoid exposure.
When using do not eat or drink.
Never siphon by mouth.
Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols.
Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks.
The vapour is heavier than air, spreads along the ground and distant ignition is possible.
Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.

Product Transfer : Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur. Be aware of handling operations that may give rise to additional hazards that result from the accumulation of static charges. These include but are not limited to pumping (especially turbulent flow), mixing, filtering, splash filling, cleaning and filling of tanks and containers, sampling, switch loading, gauging, vacuum truck operations, and mechanical movements. These activities may lead to static discharge e.g. spark formation. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/s until fill pipe submerged to twice its diameter, then ≤ 7 m/s). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations. Wait 2 minutes after tank filling (for tanks such as those on road tanker vehicles) before opening hatches or manholes. Wait 30 minutes after tank filling (for large storage tanks) before opening hatches or manholes.

7.2 Conditions for safe storage, including any incompatibilities

Other data : Drum and small container storage: Keep containers closed when not in use. Drums should be stacked to a maximum of 3 high. Use properly labeled and closable containers. Packaged product must be kept tightly closed and stored in a diked

(bunded) well-ventilated area, away from, ignition sources and other sources of heat. Take suitable precautions when opening sealed containers, as pressure can build up during storage. Tank storage: Tanks must be specifically designed for use with this product. Bulk storage tanks should be diked (bunded). Locate tanks away from heat and other sources of ignition. Cleaning, inspection and maintenance of storage tanks is a specialist operation, which requires the implementation of strict procedures and precautions. Keep in a cool place. Electrostatic charges will be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment to reduce the risk. The vapours in the head space of the storage vessel may lie in the flammable/explosive range and hence may be flammable. Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

Packaging material : **Suitable material:** For containers, or container linings use mild steel, stainless steel.Aluminium may also be used for applications where it does not present an unnecessary fire hazard.Examples of suitable materials are: high density polyethylene (HDPE), polypropylene (PP), and Viton (FKM), which have been specifically tested for compatibility with this product.For container linings, use amine-adduct cured epoxy paint.For seals and gaskets use: graphite, PTFE, Viton A, Viton B.
Unsuitable material: Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Examples of materials to avoid are: natural rubber (NR), nitrile rubber (NBR), ethylene propylene rubber (EPDM), polymethyl methacrylate (PMMA), polystyrene, polyvinyl chloride (PVC), polyisobutylene.However, some may be suitable for glove materials.

Container Advice : Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers. Gasoline containers must not be used for storage of other products.

7.3 Specific end use(s)

Specific use(s) : Not applicable.

Ensure that all local regulations regarding handling and storage facilities are followed.
See additional references that provide safe handling practices for liquids that are determined to be static accumulators: American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practices on Static Electricity).

IEC/TS 60079-32-1: Electrostatic hazards, guidance

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
benzene	71-43-2	TWA	0,5 ppm 1,6 mg/m3	Shell Internal Standard (SIS) for 8-12 hour TWA.
benzene	71-43-2	STEL	2,5 ppm 8 mg/m3	Shell Internal Standard (SIS) for 15 min (STEL)

Biological occupational exposure limits

No biological limit allocated.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

gasoline : End Use: Workers
Exposure routes: Inhalation
Value: 840 mg/m3/ 8hlong term, local effects
End Use: Consumers
Exposure routes: Inhalation
Value: 180 mg/m3/ 24hlong term, local effects

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.
Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.
Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.
National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/
Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/
Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/
Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA) , Germany http://www.dguv.de/inhalt/index.jsp
L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil

8.2 Exposure controls

Engineering measures The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include:
Use sealed systems as far as possible.
Firewater monitors and deluge systems are recommended.
Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits.
Local exhaust ventilation is recommended.
Eye washes and showers for emergency use.

General Information:
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 persons; provide specific activity training to operators to minimise exposures; wear suitable gloves and coveralls to prevent skin contamination; wear respiratory protection when there is potential for inhalation; clear up spills immediately and dispose of wastes safely.Ensure safe systems of work or equivalent arrangements are in place to manage risks. Regularly inspect, test and maintain all control measures. Consider the need for risk based health surveillance.
Do not ingest. If swallowed then seek immediate medical assistance

Personal protective equipment

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Eye protection	:	Wear goggles for use against liquids and gas. If a local risk assessment deems it so then chemical splash goggles may not be required and safety glasses may provide adequate eye protection.
Hand protection		
Remarks	:	Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same, but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material.

Select gloves tested to a relevant standard (e.g. Europe EN374, US F739). When prolonged or frequent repeated contact occurs, Nitrile gloves may be suitable. (Breakthrough time of > 240 minutes.) For incidental contact/splash protection Neoprene, PVC gloves may be suitable.

Skin and body protection : Wear chemical resistant gloves/gauntlets and boots. Where risk of splashing, also wear an apron.

Respiratory protection : If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. All respiratory protection equipment and use must be in accordance with local regulations.

Select a filter suitable for the combination of organic gases and vapours [Type A/Type P boiling point >65°C (149°F)].

Environmental exposure controls

General advice : Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.
Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Chapter 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water.
Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : colourless

Odour	:	Hydrocarbon
Odour Threshold	:	Data not available
pH	:	Not applicable
Melting point/freezing point	:	Data not available
Initial boiling point and boiling range	:	25 - 220 °C
Flash point	:	<= -45 °C
Evaporation rate	:	Data not available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	8 %(V)
Lower explosion limit	:	1 %(V)
Vapour pressure	:	50 - 70 kPa (38,0 °C) 50 - 160 kPa (50,0 °C)
Relative vapour density	:	Data not available
Relative density	:	Data not available
Density	:	700 - 740 kg/m3 (15,0 °C)

Solubility(ies)

Water solubility	:	negligible
Solubility in other solvents	:	Data not available
Partition coefficient: n-octanol/water	:	log Pow: ca. 1,43 - 7
Auto-ignition temperature	:	> 250 °C

Viscosity

Viscosity, kinematic	:	0,4 - 0,71 mm2/s (40,0 °C)
Explosive properties	:	Classification Code: NOT CLASS: Not classified
Oxidizing properties	:	Not applicable

9.2 Other information

Conductivity	:	Low conductivity: < 100 pS/m, The conductivity of this material makes it a static accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10,000 pS/m., Whether a liquid is nonconductive or semiconductive, the precautions are the same., A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid

SECTION 10: Stability and reactivity

10.1 Reactivity

May oxidise in the presence of air.

10.2 Chemical stability

Stable under normal conditions of use.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	No hazardous reaction is expected when handled and stored according to provisions

10.4 Conditions to avoid

Conditions to avoid	:	Avoid heat, sparks, open flames and other ignition sources. In certain circumstances product can ignite due to static electricity.

10.5 Incompatible materials

Materials to avoid	:	Strong oxidising agents.

10.6 Hazardous decomposition products

Hazardous decomposition products	:	Hazardous decomposition products are not expected to form during normal storage. Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Basis for assessment	:	Information given is based on product data, a knowledge of the components and the toxicology of similar products.Unless

indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

Information on likely routes of exposure : Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion.

Acute toxicity

Product:

Acute oral toxicity : LD 50 Rat: > 5.000 mg/kg
Remarks: Low toxicity:

Acute inhalation toxicity : LC 50 Rat: > 5 mg/l
Exposure time: 4 h
Remarks: Low toxicity:

Remarks: Based on human experience, breathing of vapours or mists may cause a temporary burning sensation to nose, throat and lungs.

Acute dermal toxicity : LD 50 Rabbit: > 2.000 mg/kg
Remarks: Low toxicity:

Acute toxicity (other routes of administration) :

Remarks: Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion.

Skin corrosion/irritation

Product:

Remarks: Irritating to skin.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Product:

Remarks: Not a sensitiser., Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Product:

: Remarks: Contains Benzene, CAS # 71-43-2., May cause

heritable genetic damage

Remarks: Mutagenicity studies on gasoline and gasoline blending streams have shown predominantly negative results.

Carcinogenicity

Product:

Remarks: Contains Benzene, CAS # 71-43-2., Known human carcinogen.

Remarks: Contains Benzene, CAS # 71-43-2., May cause leukaemia (AML - acute myelogenous leukaemia)., May cause MDS (Myelodysplastic Syndrome).

Remarks: Inhalation exposure to mice causes liver tumours, which are not considered relevant to humans.

Remarks: An epidemiology study of more than 18,000 petroleum marketing and distribution workers found no significantly increased risk of death from leukemia, multiple myeloma, or kidney cancer associated with gasoline exposure.

Material	GHS/CLP Carcinogenicity Classification
Gasoline, low boiling point naphtha	Carcinogenicity Category 1B
benzene	Carcinogenicity Category 1A
methanol	No carcinogenicity classification.
cumene	No carcinogenicity classification.
tert-butyl methyl ether	No carcinogenicity classification.
cyclohexane	No carcinogenicity classification.
Ethylbenzene	No carcinogenicity classification.
Naphthalene	Carcinogenicity Category 2
n-Hexane	No carcinogenicity classification.
toluene	No carcinogenicity classification.
Trimethylbenzene (all isomers)	No carcinogenicity classification.
Xylene, mixed isomers	No carcinogenicity classification.

Material	Other Carcinogenicity Classification
Gasoline, low boiling point naphtha	IARC: Group 2B: Possibly carcinogenic to humans

benzene	IARC: Group 1: Carcinogenic to humans
cumene	IARC: Group 2B: Possibly carcinogenic to humans
tert-butyl methyl ether	IARC: Group 3: Not classifiable as to its carcinogenicity to humans
Ethylbenzene	IARC: Group 2B: Possibly carcinogenic to humans
Naphthalene	IARC: Group 2B: Possibly carcinogenic to humans
toluene	IARC: Group 3: Not classifiable as to its carcinogenicity to humans
Xylene, mixed isomers	IARC: Group 3: Not classifiable as to its carcinogenicity to humans

Reproductive toxicity

Product:

:

Remarks: Contains Toluene, CAS # 108-88-3., Causes foetotoxicity at doses which are maternally toxic.

Remarks: Contains n-Hexane, CAS # 110-54-3., May impair fertility at doses which produce other toxic effects.

Remarks: Contains Toluene, CAS # 108-88-3., Many case studies involving abuse during pregnancy indicate that toluene can cause birth defects, growth retardation and learning difficulties.

Remarks: Inhalation of high concentrations of gasoline vapour containing Methyl tertiary butyl ether produced a very low incidence of rare birth defects (ventral midline closure failure) in mice.

STOT - single exposure

Product:

Remarks: High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.

STOT - repeated exposure

Product:

Remarks: Kidney: caused kidney effects in male rats which are not considered relevant to humans

Aspiration toxicity

Product:

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Further information

Product:

Remarks: Exposure to very high concentrations of similar materials has been associated with irregular heart rhythms and cardiac arrest.

Remarks: Contains Toluene, CAS # 108-88-3., Prolonged and repeated exposures to high concentrations have resulted in hearing loss in rats. Solvent abuse and noise interaction in the work environment may cause hearing loss.

Remarks: Contains Toluene, CAS # 108-88-3., Abuse of vapours has been associated with organ damage and death.

Remarks: Contains Benzene, CAS # 71-43-2., May cause MDS (Myelodysplastic Syndrome).

Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

SECTION 12: Ecological information

12.1 Toxicity

Basis for assessment	:	Fuels are typically made from blending several refinery streams. Ecotoxicological studies have been carried out on a variety of hydrocarbon blends and streams but not those containing additives. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

Product:

Toxicity to fish (Acute toxicity)	:	Remarks: LL/EL/IL50 > 1 <= 10 mg/l Toxic
Toxicity to daphnia and other aquatic invertebrates (Acute toxicity)	:	Remarks: LL/EL/IL50 > 1 <= 10 mg/l Toxic
Toxicity to algae (Acute toxicity)	:	Remarks: LL/EL/IL50 > 1 <= 10 mg/l Toxic

Toxicity to fish (Chronic toxicity)	:	Remarks: NOEC/NOEL expected to be > 1.0 - <= 10 mg/l
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	Remarks: NOEC/NOEL expected to be > 1.0 - <= 10 mg/l
Toxicity to bacteria (Acute toxicity)	:	Remarks: LL/EL/IL50 >10 <= 100 mg/l Harmful

12.2 Persistence and degradability

Product:

Biodegradability	:	Remarks: The volatile constituents will oxidize rapidly by photochemical reactions in air., Major constituents are inherently biodegradable, but contains components that may persist in the environment., Based on available data, the classification criteria are not met.

no data available

12.3 Bioaccumulative potential

Product:

Bioaccumulation	:	Remarks: Contains constituents with the potential to bioaccumulate.
Partition coefficient: n-octanol/water	:	log Pow: ca. 1,43 - 7

12.4 Mobility in soil

Product:

Mobility	:	Remarks: Evaporates within a day from water or soil surfaces., Large volumes may penetrate soil and could contaminate groundwater., Toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment., Contains volatile components., Floats on water. Remarks: Ether oxygenates are significantly more water soluble and less biodegradable than benzene, toluene, ethyl benzene and xylenes (BTEX)

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

Product:

Additional ecological information	:	Films formed on water may affect oxygen transfer and damage organisms.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Recover or recycle if possible.
It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.
Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
Do not dispose into the environment, in drains or in water courses
Do not dispose of tank water bottoms by allowing them to drain into the ground.
This will result in soil and groundwater contamination.

Contaminated packaging : Drain container thoroughly.
After draining, vent in a safe place away from sparks and fire.
Residues may cause an explosion hazard.
Do not puncture, cut, or weld uncleaned drums.
Send to drum recoverer or metal reclaimer.
Do not pollute the soil, water or environment with the waste container.

Local legislation

SECTION 14: Transport information

14.1 UN number

ADR : 1203
IMDG : 1203
IATA : 1203

14.2 Proper shipping name

ADR : GASOLINE
IMDG : GASOLINE
IATA : GASOLINE

14.3 Transport hazard class

ADR : 3
IMDG : 3
IATA : 3

14.4 Packing group

ADR
Packing group : II

Classification Code : F1
Hazard Identification Number : 33
Labels : 3

IMDG
Packing group : II
Labels : 3

IATA
Packing group : II
Labels : 3

14.5 Environmental hazards

ADR
Environmentally hazardous : yes

IMDG
Marine pollutant : yes

14.6 Special precautions for user

Remarks : Special Precautions: Refer to Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied. MARPOL Annex 1 rules apply for bulk shipments by sea.

SECTION 15: Regulatory information

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

Other regulations : The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

SECTION 16: Other information

Full text of H-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.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.

H350	May cause cancer.
H361	Suspected of damaging fertility or the unborn child.
H370	Causes damage to organs.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Asp. Tox.	Aspiration hazard
Carc.	Carcinogenicity
Flam. Liq.	Flammable liquids
Muta.	Germ cell mutagenicity
Repr.	Reproductive toxicity
Skin Irrit.	Skin irritation
STOT SE	Specific target organ toxicity - single exposure

Abbreviations and Acronyms : The standard abbreviations and acronyms used in this document can be looked up in reference literature (e.g. scientific dictionaries) and/or websites.

ACGIH = American Conference of Governmental Industrial Hygienists
ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road
AICS = Australian Inventory of Chemical Substances
ASTM = American Society for Testing and Materials
BEL = Biological exposure limits
BTEX = Benzene, Toluene, Ethylbenzene, Xylenes
CAS = Chemical Abstracts Service
CEFIC = European Chemical Industry Council
CLP = Classification Packaging and Labelling
COC = Cleveland Open-Cup
DIN = Deutsches Institut fur Normung
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
DSL = Canada Domestic Substance List
EC = European Commission
EC50 = Effective Concentration fifty
ECETOC = European Center on Ecotoxicology and Toxicology Of Chemicals
ECHA = European Chemicals Agency
EINECS = The European Inventory of Existing Commercial Chemical Substances
EL50 = Effective Loading fifty
ENCS = Japanese Existing and New Chemical Substances Inventory
EWC = European Waste Code
GHS = Globally Harmonised System of Classification and Labelling of Chemicals
IARC = International Agency for Research on Cancer
IATA = International Air Transport Association
IC50 = Inhibitory Concentration fifty
IL50 = Inhibitory Level fifty

IMDG = International Maritime Dangerous Goods
INV = Chinese Chemicals Inventory
IP346 = Institute of Petroleum test method N° 346 for the determination of polycyclic aromatics DMSO-extractables
KECI = Korea Existing Chemicals Inventory
LC50 = Lethal Concentration fifty
LD50 = Lethal Dose fifty per cent.
LL/EL/IL = Lethal Loading/Effective Loading/Inhibitory loading
LL50 = Lethal Loading fifty
MARPOL = International Convention for the Prevention of Pollution From Ships
NOEC/NOEL = No Observed Effect Concentration / No Observed Effect Level
OE_HPV = Occupational Exposure - High Production Volume
PBT = Persistent, Bioaccumulative and Toxic
PICCS = Philippine Inventory of Chemicals and Chemical Substances
PNEC = Predicted No Effect Concentration
REACH = Registration Evaluation And Authorisation Of Chemicals
RID = Regulations Relating to International Carriage of Dangerous Goods by Rail
SKIN_DES = Skin Designation
STEL = Short term exposure limit
TRA = Targeted Risk Assessment
TSCA = US Toxic Substances Control Act
TWA = Time-Weighted Average
vPvB = very Persistent and very Bioaccumulative

Further information

Other information : This product is intended for use in closed systems only.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.