natref

MATERIAL SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

SDS # : A00729

STRAIGHT RUN NAPHTHA

Date of the previous version: 2013-06-17 **Revision Date:** 2013-06-18 **Version** 1.02

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

1.1. Product identifier

Product name STRAIGHT RUN NAPHTHA
Pure substance/mixture Substance

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

Identified uses Manufacture of substance, Use as an intermediate, Distribution of substance, Formulation & (re)packing of substances and mixtures, Uses in Coatings, Use in Cleaning Agents, Rubber production and processing, Use as a fuel.

1.3. Details of the supplier of the safety data sheet

Supplier

Natref
Jan Haak Road
Sasolburg
9570

For further information, please contact:

Contact Point	Total South Africa	Sasol Oil
E-mail Address	msds.ts@totsa.com	msds.info@sasol.com

1.4. Emergency telephone number

Total South Africa: 011 778 2000 Sasol Oil: 017 610 4444

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008
For the full text of the H-Statements mentioned in this Section, see Section 2.2.

Classification
Flammable liquids - Category 2 - H225
Aspiration toxicity - Category 1 - H304
Skin corrosion/irritation - Category 2 - H315

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Germ Cell Mutagenicity - Category 1B - H340
Carcinogenicity - Category 1B - H350
Reproductive toxicity - Category 2 - H361fd
Specific target organ systemic toxicity (single exposure) - Category 3 - H336
Specific target organ systemic toxicity (repeated exposure) - Category 2 - H373
Chronic aquatic toxicity - Category 2 - H411

DIRECTIVE 67/548/EEC or 1999/45/EC
For the full text of the R-phrases mentioned in this Section, see Section 16

Symbol(s)
F - Highly flammable
T - Toxic
N - Dangerous for the environment
Classification
F;R11 - Carc. cat. 1;R45 - Muta. cat. 2;R46 - Repr. Cat. 3;R63 - Repr. Cat. 3;R62 - Xn;R65 - Xn;R48/20/21/22 -Xi;R38 - R67 - N;R51-53

2.2. Label elements

Labelled according to REGULATION (EC) No 1272/2008

EC-No 265-042-6

Signal Word
DANGER

H225 - Highly flammable liquid and vapor
H350 - May cause cancer
H340 - May cause genetic defects
H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child
H304 - May be fatal if swallowed and enters airways
H373 - May cause damage to organs through prolonged or repeated exposure
H315 - Causes skin irritation
H336 - May cause drowsiness or dizziness
H411 - Toxic to aquatic life with long lasting effects

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Precautionary Statements
P201 - Obtain special instructions before use
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P280 - Wear protective gloves and eye/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
P243 - Take precautionary measures against static discharge
P273 - Avoid release to the environment
P501 - Dispose of contents/ container to an approved incineration plant.

2.3. Other hazards

Physical-Chemical Properties

Extremely flammable. Highly volatile. The vapours are heavier than air and may carry along the ground giving a high risk of explosion .
In case of pump . Friction generated by product discharge can create static charges of sufficient magnitude to cause SPARKS WHICH MAY LEAD TO FIRE OR EXPLOSION.

Properties Affecting Health

Repeated inhalation of large amounts of vapour results in benzene exposure .
May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.
Vapors or mists are irritating for mucous membranes, notably in the eyes.
If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious pulmonary lesions (medical survey during 48 hours) .

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Chemical nature

A complex combination of hydrocarbons produced by distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C4 through C11 and boiling in the range of approximately minus 20°C to 220°C (-4°F to 428°F).

Hazardous ingredients

Chemical Name	EC-No	REACH registration No	CAS-No	Weight %	Classification (Dir. 67/548)	Classification (Reg. 1272/2008)
Naphtha (petroleum), full-range straight-run (benzène < 10% - Flam. Liq. 2)	265-046-8	-	64741-46-4	100	F;R11 Carc.Cat.2;R45 Muta.Cat.2;R46 Repr.Cat.3;R63-62 Xn;R65-48/20/21/22 Xi;R38 R67 N;R51/53	Flam. Liq. 2 (H225) Carc. 1B (H350) Muta. 1B (H340) Repr. 2 (H361fd) Asp. Tox. 1 (H304) STOT RE 2 (H373) Skin Irrit. 2 (H315) STOT SE 3 (H336) Aquatic Chronic 2 (H411)

Other constituents required for disclosure

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Chemical Name	EC-No	REACH registration No	CAS-No	Weight %	Classification (Dir. 67/548)	Classification (Reg. 1272/2008)
Hexane	203-777-6	no data available	110-54-3	<10	F; R11 Xi; R38 N; R51-53 Repr.Cat.3; R62 Xn; R65-48/20 R67	Flam. Liq. 2 (H225) Skin Irrit. 2 (H315) Repr. 2 (H361f) STOT SE 3 (H336) STOT RE 2 (H373) Asp. Tox. 1 (H304) Aquatic Chronic 2 (H411)
Benzene	200-753-7	01-2119447106-44	71-43-2	<10	F;R11 Xi;R36/38 Carc.Cat.1;R45 Muta.Cat.2;R46 T;R48/23/24/25 Xn;R65	Flam. Liq. 2 (H225) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Carc. 1A (H350) Muta. 1B (H340) STOT RE 1 (H372) Asp. Tox. 1 (H304)
Toluene	203-625-9	01-2119471310-51	108-88-3	<10	F;R11 Xi;R38 Xn;R48/20-65 Repr.Cat.3;R63 R67	Flam. Liq. 2 (H225) Skin Irrit. 2 (H315) Repr. 2 (H361d) STOT SE 3 (H336) STOT RE 2 (H373) Asp. Tox. 1 (H304)
Xylene (mixed isomers o, m, p)	215-535-7	01-2119488216-32	1330-20-7	<5	R10 Xn;R20/21-65 Xi;R36/37/38	Flam. Liq. 3 (H226) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Asp. Tox. 1 (H304) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)
Ethylbenzene	202-849-4	01-2119489370-35	100-41-4	<2	F;R11 Xn;R20-65-48/20 Xi;R36/37/38	Flam. Liq. 2 (H225) Acute Tox. 4 (H332) Asp. Tox. 1 (H304) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335) STOT RE 2 (H373)

For the full text of the R-phrases mentioned in this Section, see Section 16
For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1. Description of first-aid measures

General advice

IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.
Before attempting to rescue casualties, isolate area from all potential sources of ignition including disconnecting electrical supply.
Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces.
Drench contaminated clothing with water before removing to avoid risk of sparks from static electricity.

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Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Check for and remove any contact lenses. Rinse eyes. If eye irritation persists, consult a specialist.
Skin contact	Remove contaminated clothing and shoes. Wash skin with soap and water. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent. In this case, the casualty should be sent immediately to hospital. For minor thermal burns. Hold the burned area under cold running water for at least five minutes, or until the pain subsides. Wash off with soap and water.
Inhalation	In case of exposure to intense concentrations of vapours, fumes or spray, transport the person away from the contaminated zone, keep warm and allow to rest. Immediately begin artificial respiration if breathing has ceased. Call a physician immediately.
Ingestion	Give nothing to drink. Do NOT induce vomiting. as there is high risk of aspiration. The fluid can enter the lungs and cause damage (chemical pneumonitis, potentially fatal). Take victim immediately to hospital. Do not wait for symptoms to develop.
Protection of First-aiders	CAUTION! First aid personnel must be aware of personal risk during rescue! Use personal protective equipment. See Section 8 for more detail.

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

Eye contact	Burning feeling and temporary redness.
Skin contact	May cause irritation. Redness.
Inhalation	Inhalation of vapours may cause headache, nausea, vomiting and an altered state of consciousness. May cause irritation of respiratory tract.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause central nervous system depression. Aspiration may cause pulmonary edema and pneumonitis.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	Treat symptomatically. Harmful: If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious inhalation pulmonary lesions (medical survey during 48 hours).

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

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Suitable Extinguishing Media	Extinguishing media - small fires: Carbon dioxide (CO_2), Dry powder, Sand or earth. Extinguishing media - large fires: Foam, Foams on base of general-purpose emulsifier, Water spray, Water fog (trained personnel only).
Unsuitable Extinguishing Media	Do not use a solid water stream as it may scatter and spread 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

Special Hazard	In case of fire hazardous decomposition products may be produced such as:. Sulfur oxides. Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration. Vapors may form explosive mixtures with air.

5.3. Advice for fire-fighters

Special protective equipment for fire-fighters	In case of a large fire or in confined or poorly ventilated spaces, wear full fire resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Other information	Cool down any tanks and surfaces exposed to fire by spraying abundantly with water. Use water to cool tanks and parts exposed to the thermal flux not caught up in the flames. Do not allow run-off from fire fighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

General Information	Except in case of small spillages: The feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. If required, notify relevant authorities according to all applicable regulations. Avoid contact with skin, eyes and inhalation of vapors. Evacuate non-essential personnel. For personal protection see section 8. Stop or contain leak at the source, if safe to do so. Cut off the electric power supply if this operation causes no sparks in the area containing vapors from the product. Stay upwind. In case of large spillages, alert occupants in downwind areas. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). In case of important spillages: risk of fire or explosion . Cover discharges with foam in order to reduce the risks of ignition. Vapours are heavier than air and may spread near ground level to sources of ignition .
Advice for non-emergency personnel	Do not touch or walk through spilled material. For personal protection see section 8. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

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Advice for emergency responders	Take all appropriate steps to avoid fire, explosion and inhalation hazards to the rescuers including the use of breathing apparatus. In case of: Small spillages: normal antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and antistatic material. Work gloves (preferably gauntlets) providing adequate chemical resistance. Remarks:. Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Work helmet. Antistatic non-skid safety shoes or boots. Goggles and/or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory protection: A half or full-face respirator with filter(s) for organic vapours (and when applicable: for H2S). A Self-Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure.

6.2. Environmental precautions

General Information	The product should not be allowed to enter drains, water courses or the soil. Do not allow material to contaminate ground water system. In case of spill in river, suspend the use of the water downstream to the spillpoint. If necessary: Consult an expert. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and materials for containment and cleaning up

Methods for Containment	Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13). Large spillages may be cautiously covered with foam, if available, to limit fire risk. In case of spillage in the water: Let the product spread on the surface of the water, In case of no obstacle (barrage, bank or shore). Spillages of liquid product in the water will likely result in a quick and complete vaporization of the product. In case of small spillages in closed waters , when the quantities to be recovered are small (some tens of liters), contain product with floating barriers or other equipment.
Methods for cleaning up	Never use dispersing agents. Transfer recovered product and other materials to suitable tanks or containers and store/dispose according to relevant regulations. Do not flush into surface water or sanitary sewer system. Prevent product from entering drains.

6.4. Reference to other sections

Personal Protective Equipment	See Section 8 for more detail.
Waste treatment	See section 13.
Other information	Recommended measures are based on the most likely spillage scenarios for this material. However, local conditions (wind, air temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions. For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken.

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7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

Ensure that all relevant regulations regarding explosive atmospheres, handling and storage facilities of flammable products, are followed. Take precautionary measures against static electricity.
The inspection, cleaning and maintenance of storage containers require the application of strict procedures and must be entrusted to qualified personnel (internal or external).
Ensure adequate ventilation. Vapors may form explosive mixtures with air. Do not smoke.
Avoid breathing vapors or mists. Avoid contact with skin, eyes and clothing.
NEVER ATTEMPT TO PRIME THE CONTAINER SIPHON BY SUCKING WITH THE MOUTH. Prevent the formation of vapors, mists and aerosols.
Do not use compressed air for filling, discharging, or handling operations. Never pierce, drill, grind, cut, saw or weld any empty container.
For personal protection see section 8.

Technical measures

Ensure adequate ventilation.
WHILE MOVING THE PRODUCT:. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.
Take all necessary precautions to prevent water from entering the containers, tanks, transfer lines etc...

Prevention of fire and explosion

Handle away from any source of ignition (open flame and sparks) and heat (hot manifolds or casings). Take precautionary measures against static discharges. Ground/bond containers, tanks and transfer/receiving equipment. Friction generated by product discharge can create static charges of sufficient magnitude to cause SPARKS WHICH MAY LEAD TO FIRE OR EXPLOSION. Do not allow splash loading and ensure that the product is poured slowly, particularly at the beginning of the operation.
Empty containers may contain flammable or explosive vapors. Never weld any container or empty pipe that has not been degassed.
OPERATE ONLY ON COLD AND DEGASSED TANKS IN VENTILATED PREMISES (TO AVOID RISK OF EXPLOSION).
Design installations (machinery and equipment) to prevent burning product from spreading (tanks, retention systems, interceptors (traps) in drainage systems).

Hygiene measures

When using, do not eat, drink or smoke. Avoid contact with skin, eyes and clothing. Avoid breathing vapors, mist or gas. Wash hands before breaks and immediately after handling the product. IF ON SKIN: Wash skin with soap and water. Remove contaminated clothing and shoes.
Gloves must be periodically inspected and changed in case of wear, perforations or contaminations.
Provide regular cleaning of equipment, work area and clothing. Keep away from food, drink and animal feeding stuffs. Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Use personal protective equipment as required.

7.2. Conditions for safe storage, including any incompatibilities

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Technical measures/Storage conditions	Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation. All the electric installations, including the lighting of rooms that may contain this product, must be adapted to the risk area, in compliance with the European ATEX directives. Take precautionary measures against static discharges. Ensure all equipment is electrically grounded before beginning transfer operations. Storage installations should be designed with adequate bunds so as to prevent ground or water pollution in case of leaks or spills. Do not remove the hazard labels of the containers (even if they are empty). Store the packed products (drums, samples, cans ...) in properly ventilated rooms, away from damp, heat and any potential source of ignition. Keep preferably in the original container. Otherwise reproduce all indication of the regulation label on the new container. Keep containers tightly closed and properly labelled. Store separately from oxidising agents.
Materials to Avoid	Strong oxidizing agents, Strong acids, Strong bases. (herbicides...), Halogens.
Packaging material	Use only containers, seals, pipes, etc... made in a material suitable for use with aromatic hydrocarbons.

7.3. Specific end uses

Specific use(s) See exposure scenarios.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits Ingredients with workplace control parameters

Chemical Name	European Union
Hexane 110-54-3	TWA 20 ppm TWA 72 mg/m^3
Benzene 71-43-2	S* TWA 1 ppm TWA 3.25 mg/m^3
Toluene 108-88-3	TWA 50 ppm TWA 192 mg/m^3 STEL 100 ppm STEL 384 mg/m^3 S*
Xylene (mixed isomers o, m, p) 1330-20-7	TWA 50 ppm TWA 221 mg/m^3 STEL 100 ppm STEL 442 mg/m^3 S*
Ethylbenzene 100-41-4	TWA 100 ppm TWA 442 mg/m^3 STEL 200 ppm STEL 884 mg/m^3 S*

Legend See section 16

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DNEL Worker (Industrial/Professional)

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects
Naphtha (petroleum), full-range straight-run (benzène < 10% - Flam. Liq. 2) 64741-46-4	1300 mg/m³/15 min (inhalation)	1100 mg/m³/15 min (inhalation)		840 mg/m³/8h (inhalation)

DNEL Consumer

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects
Naphtha (petroleum), full-range straight-run (benzène < 10% - Flam. Liq. 2) 64741-46-4	1200 mg/m³/15 min (inhalation)	640 mg/m³/15 min (inhalation)		180 mg/m³/24h (inhalation)

8.2. Exposure controls

Occupational Exposure Controls

Engineering Measures

Ensure adequate ventilation. Apply technical measures to comply with the occupational exposure limits.
When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment. Do not enter empty storage tanks until measurements of available oxygen have been carried out.

Personal Protective Equipment

General Information

Protective engineering solutions should be implemented and in use before personal protective equipment is considered.

Respiratory protection

In case of insufficient ventilation wear suitable respiratory equipment. To enter tankers, tanks, reservoirs where the oxygen content is too low, wear insulating respiratory apparatus.
In an emergency or for exceptional short-lasting jobs in an atmosphere polluted by the product, it is necessary to wear protective respiratory equipment. When using a mask or half mask :. Full face piece respirator with organic vapor/acid gas cartridge or canister: Type AX. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.

Eye Protection

If splashes are likely to occur, wear:. Safety glasses with side-shields, or, Face-shield.

Skin and body protection

Wear suitable protective clothing: hydrocarbon-proof clothing. Protective shoes or boots.

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Hand Protection Hydrocarbon-proof gloves for aromatic hydrocarbons. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.
Note. Gloves made of PVA are not water-resistant, and are not suitable for emergency use.

Repeated or prolonged exposure			
Glove material	Glove thickness	Break through time	Remarks
PVA	(*)	> 480 min	EN 374 (*) any thickness
Fluorinated rubber	(*)	> 480 min	EN 374 (*) any thickness
Nitrile rubber	> 0.5 mm	> 480 min	EN 374

In case of contact through splashing:			
Glove material	Glove thickness	Break through time	Remarks
Nitrile rubber	> 0.3 mm	> 60 min	EN 374

Environmental exposure controls

General Information The product should not be allowed to enter drains, water courses or the soil.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	limpid
Color	colorless To light yellow
Physical State @20°C	liquid
Odor	Characteristic

Property	Values	Remarks	Method
pH		Not applicable	
Boiling point/boiling range	**30 - 184 °C**		ASTM D 86
	95 - 363 °F		ASTM D 86
Flash point	**-40 °C**		ASTM D 93
	-40 °F		ASTM D 93.
Evaporation rate		Not applicable	
Flammability Limits in Air			
upper	7.6 %		
Lower	1.4 %		
Vapor Pressure	95-100 kPa @ 37.8 °C		EN 13016-1
Vapor density	> 3		
Density	645 - 680 kg/m3		
Water solubility		@ 15 °C	
Solubility in other solvents		Not applicable	
		Soluble in many common organic solvents	
logPow			
Autoignition temperature	**250 °C**	Not applicable	ASTM E659-78
	482 °F		ASTM E659-78
Viscosity, kinematic	-		

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Explosive properties	Not considered explosive based on chemical structure and oxygen balance considerations
Oxidizing Properties	This product is not considered oxidising based on chemical structure considerations
Possibility of hazardous reactions	None under normal processing

9.2. Other information

10. STABILITY AND REACTIVITY

10.1. Reactivity

General Information No information available.

10.2. Chemical stability

Stability Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous Reactions None under normal processing.

10.4. Conditions to Avoid

Conditions to Avoid Take precautionary measures against static discharges. Heat, flames and sparks.

10.5. Incompatible Materials

Materials to Avoid Strong oxidizing agents, Strong acids, Strong bases. (herbicides...), Halogens.

10.6. Hazardous Decomposition Products

Hazardous Decomposition Products None under normal use

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity Local effects Product Information

General Information	The acute toxicity has been adequately characterised in a large number of GLP-compliant guideline investigations following oral, dermal or inhalation exposure.
Skin contact	Heavier, aromatic materials caused more irritation than lighter, paraffinic streams. May cause irritation. Redness.
Eye contact	Key study indicated that the material is not irritating to the eye. Burning feeling and temporary redness.

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Inhalation

. Inhalation of vapours may cause headache, nausea, vomiting and an altered state of consciousness.
May cause irritation of respiratory tract.

Ingestion

. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause central nervous system depression.
Aspiration may cause pulmonary edema and pneumonitis.

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Naphtha (petroleum), full-range straight-run (benzène < 10% - Flam. Liq. 2)	LD50 > 5000 mg/kg bw (rat - OECD TG 401)	LD50 > 2000 mg/kg bw (rabbit - OECD TG 402 - under occlusive conditions)	LC50 (4h)> 5610 mg/m³ air (vapor) (rat - OECD 403)

Sensitization

Sensitization

There are no reports available to indicate that the substance has the potential to cause skin and respiratory sensitisation.

Specific effects

Carcinogenicity

The carcinogenic potential of the substance has been investigated (inhalation exposure for 2 years). Observations are not considered relevant to humans. A constituent that is known to be a human carcinogen. BENZENE.

Chemical Name	European Union
Naphtha (petroleum), full-range straight-run (benzène < 10% - Flam. Liq. 2) 64741-46-4	Carc. 1B (H350)

Other constituents required for disclosure

Chemical Name	European Union
Benzene 71-43-2	Carc. 1A (H350)

Mutagenicity

Chemical Name	European Union
Naphtha (petroleum), full-range straight-run (benzène < 10% - Flam. Liq. 2) 64741-46-4	Muta. 1B (H340)

Other constituents required for disclosure

Chemical Name	European Union
Benzene 71-43-2	Muta. 1B (H340)

Germ Cell Mutagenicity

The mutagenic potential of the substance has been extensively studied in a range of in-vivo and in-vitro assays. The majority of the studies showed no evidence of mutagenic activity. A constituent is known to be a germ cell mutagen. Benzene.

Reproductive toxicity

Results of guideline developmental toxicity studies on the substance and OECD developmental toxicity screening studies showed no evidence of developmental toxicity in rats. The substance can contain amounts of toluene and/or n-hexane constituents that are known to be potential reprotoxicants.

Chemical Name	European Union

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Naphtha (petroleum), full-range straight-run (benzène < 10% - Flam. Liq. 2) 64741-46-4	Repr. 2 (361fd)

Other constituents required for disclosure

Chemical Name	European Union
Hexane 110-54-3	Repr. 2 (H361f)
Toluene 108-88-3	Repr. 2 (H361d)

Repeated Dose Toxicity

Target Organ Effects (STOT)

Specific target organ systemic toxicity (single exposure)

Acute exposure studies show no evidence of systemic toxicity, other than a potential to cause narcosis / CNS depression at higher exposure concentrations.

Specific target organ systemic toxicity (repeated exposure)

The repeat dose toxicity of the substance has been studied following dermal and inhalation exposure for periods between 10 days and up to 2 years. In dermal studies, no systemic toxicity has been seen. The only effect observed was moderate to severe dermal irritation. Repeated inhalation exposure causes : light hydrocarbon nephropathy. An effect which is considered to be both sex and species specific.

Aspiration toxicity

The fluid can enter the lungs and cause damage (chemical pneumonitis, potentially fatal).

Other information

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Acute aquatic toxicity - Product Information

Acute aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
Naphtha (petroleum), full-range straight-run (benzène < 10% - Flam. Liq. 2) 64741-46-4	EL50 (72 h) > 3.1 mg/l (Selenastrum capricornutum/Pseudokirchnerella subcapitata - OECD 201)	EL50 (48 h) > 4.5 mg/l (Daphnia magna - OECD 202)	LL50 (96 h) > 8.2 mg/l (Pimephales promelas - OECD 203)	

Chronic aquatic toxicity ·Production Information

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Chronic aquatic toxicity - Component Information

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Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms

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Naphtha (petroleum), full-range straight-run (benzène < 10% - Flam. Liq. 2) 64741-46-4		NOEL (21d) > 2.6 mg/l (Daphnia magna - OECD 211)	NOEL (14/28d) > 2.6 mg/l (Read across from Daphnia magna)	

Effects on terrestrial organisms
No information available.

12.2. Persistence and degradability

General Information
Substance is a UVCB. Standard tests for this endpoint are not appropriate.

12.3. Bioaccumulative potential

Product Information Substance is a UVCB. Standard tests for this endpoint are not appropriate.

logPow Not applicable
Component Information .

12.4. Mobility in soil

Mobility				
Method	Compartment	Result	(%)	Remarks
Percent distribution in media (Calculation according to Mackay, Level III)	Soil		0.34	
Percent distribution in media (Calculation according to Mackay, Level III)	Sediment		0.81	
Percent distribution in media (Calculation according to Mackay, Level III)	Water		5.83	
Percent distribution in media (Calculation according to Mackay, Level III)	Air		93.02	

Soil Given its physical and chemical characteristics, the product is generally mobile in the ground. It may contaminate ground water.

Air The product evaporates in the air and dissipates more or less depending on local conditions. However, it may stagnate in pools in low-lying areas, in an undisturbed or confined atmosphere. Volatilisation is dependent on Henry's Constant which is not applicable to UVCB.

Water The product spreads on the surface of the water. May exhibit slight solubility in water. Naphtas are resistant to hydrolysis because they lack a functional group that is hydrolytically reactive.

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12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment	Anthracene is not present in this substance at greater than 0.1% (CONCAWE 2010). No other representative hydrocarbon structure were found to meet the PBT/vPvB criteria.

12.6. Other adverse effects

General Information	No information available.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products	Dispose of in accordance with the European Directives on waste and hazardous waste.
Contaminated packaging	Empty containers may contain flammable or explosive vapors. Do not cut, weld, bore, burn or incinerate emptied containers, unless they have been cleaned and declared safe. Empty containers should be taken to an approved waste handling site for recycling or disposal.
EWC Waste Disposal No.	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

14. TRANSPORT INFORMATION

ADR/RID

UN/ID No	UN1268
Proper shipping name	Petroleum products, n.o.s.
Proper shipping name	PETROLEUM PRODUCTS, N.O.S.
Hazard class	3
Packing Group	II
ADR/RID-Labels	3
Environmental hazard	Yes
Classification Code	F1
Special Provisions	363, 640D
Tunnel Restriction Code	(D/E)
ADR Hazard Id (Kemmler Number)	33
Description	UN1268, PETROLEUM PRODUCTS, N.O.S., 3, PG II, (D/E)
Excepted Quantity	E2
Limited quantity	1L

IMDG/IMO

UN/ID No	UN1268
Proper shipping name	Petroleum products, n.o.s.

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Hazard class	3
Packing Group	II
Marine Pollutant	P
EmS No.	F-E, S-E
Description	UN1268, PETROLEUM PRODUCTS, N.O.S., 3, PG II, (-40°C c.c.)
Special Provisions	363
Excepted Quantity	E2
Limited quantity	1L

ICAO/IATA

UN/ID No	UN1268
Proper shipping name	Petroleum products, n.o.s.
Hazard class	3
Packing Group	II
ERG Code	3H
Special Provisions	A3
Description	UN1268, PETROLEUM PRODUCTS, N.O.S., 3, PG II
Excepted Quantity	E2
Limited quantity	1L

ADN

UN/ID No	UN1268
Proper shipping name	Petroleum products, n.o.s.
Proper shipping name	PETROLEUM PRODUCTS, N.O.S.
Hazard class	3
Hazard Labels	3
Packing Group	II
Environmental hazard	Yes
Classification Code	F1
Special Provisions	363, 640D
Description	UN1268, PETROLEUM PRODUCTS, N.O.S., 3, PG II
Excepted Quantity	E2
Limited quantity	1L
Ventilation	VE01

15. REGULATORY INFORMATION

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

European Union

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Other regulations
Directive 1999/13/EC on the limitation of emissions of volatile organic compounds

International Inventories

EINECS/ELINCS	Complies
TSCA	Complies
DSL	Complies
ENCS	-
IECSC	Complies
KECL	Complies
PICCS	-
AICS	Complies
NZIoC	Complies

Legend
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

Further information

15.2. Chemical Safety Assessment

Chemical Safety Assessment A Chemical Safety Assessment has been carried out for this substance

16. OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3
R10 - Flammable
R11 - Highly flammable
R12 - Extremely flammable
R38 - Irritating to skin
R45 - May cause cancer
R46 - May cause heritable genetic damage
R62 - Possible risk of impaired fertility
R63 - Possible risk of harm to the unborn child
R65 - Also harmful: may cause lung damage if swallowed
R66 - Repeated exposure may cause skin dryness or cracking
R67 - Vapors may cause drowsiness and dizziness

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R20/21 - Harmful by inhalation and in contact with skin
R36/38 - Irritating to eyes and skin
R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation
R48/23/24/25 - Also toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Full text of H-Statements referred to under sections 2 and 3
H224 - Extremely flammable liquid and vapor
H225 - Highly flammable liquid and vapor
H226 - Flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H312 - Harmful in contact with skin
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H336 - May cause drowsiness or dizziness
H340 - May cause genetic defects
H350 - May cause cancer
H372 - Causes damage to organs through prolonged or repeated exposure
H373 - May cause damage to organs through prolonged or repeated exposure
H361d - Suspected of damaging the unborn child
H361f - Suspected of damaging fertility
H411 - Toxic to aquatic life with long lasting effects

Abbreviations, acronyms
bw = body weight
bw/day = body weight/day
GLP = Good Laboratory Practice

Legend Section 8

+	Sensitizer	*	Skin designation
**	Hazard Designation	C:	Carcinogen
M:	Mutagen	R:	Toxic to reproduction

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Revision Note (M)SDS sections updated: 1. 14.

Further information Other uses than these listed under section 1.2 may have been foreseen for the substance(s) contained in the product. Please contact us if your use is not listed under section 1.2

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above.It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk.The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity.The user bears sole liability for the precautions required when using the product.The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive.It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

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End of the safety data sheet