according to the Hazardous Products Regulations

Hexane (extraction grade)

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SECTION 1. IDENTIFICATION

Product name : Hexane (extraction grade)

Product code : Q1252

Manufacturer or supplier's details

Manufacturer/Supplier : Shell Chemicals Canada

PO Box 4280 STN C CALGARY AB T2T 5Z5

Canada

Telephone : 1-855-697-4355

Telefax : 1-866-213-7508

Emergency telephone number

CHEMTREC (24 hr) : 1-800-424-9300

Recommended use of the chemical and restrictions on use

Recommended use : Industrial Solvent.

Restrictions on use : Restricted to professional users.

This product must not be used in applications other than those listed in Section 1 without first seeking the advice of the sup-

plier.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Flammable liquids : Category 2

Aspiration hazard : Category 1

Skin irritation : Category 2

Specific target organ toxicity

- single exposure

Category 3 (Narcotic effects)

Reproductive toxicity : Category 2

Specific target organ toxicity

- repeated exposure

Category 2 (Central nervous system, Peripheral nervous sys-

tem

Long-term (chronic) aquatic

hazard

Category 2

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GHS label elements

Hazard pictograms







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Signal word : Danger

Hazard statements : PHYSICAL HAZARDS:

H225 Highly flammable liquid and vapour.

HEALTH HAZARDS:

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H361 Suspected of damaging fertility or the unborn child. H373 May cause damage to organs (Central nervous system, Peripheral nervous system) through prolonged or repeated ex-

posure.

ENVIRONMENTAL HAZARDS:

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P240 Ground and bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting equip-

ment. P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash hands thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/

face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P370 + P378 In case of fire: Use appropriate media to extinguish.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P331 Do NOT induce vomiting.

P302 + P352 IF ON SKIN: Wash with plenty of water and soap. P332 + P313 If skin irritation occurs: Get medical advice/ attention

P362 + P364 Take off contaminated clothing and wash it before reuse.

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P304 + P340 IF INHALED: Remove person to fresh air and

keep comfortable for breathing.

P312 Call a POISON CENTER/ doctor if you feel unwell. P308 + P313 IF exposed or concerned: Get medical advice/

attention.

P391 Collect spillage.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal:

P501 Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

Other hazards which do not result in classification

May form flammable/explosive vapour-air mixture.

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 airvapour mixtures can occur.

Vapours may be irritating to the eye.

Repeated exposure may cause skin dryness or cracking.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Substance name : Hexane (extraction grade)

CAS-No. : 64742-49-0

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Naphtha (petroleum),	Naphtha (petro-		
hydrotreated light	leum), hy- drotreated light		99 - 100

Further information

Contains:

Chemical name	Identification number	Concentration (% w/w)
n-Hexane	110-54-3	<= 55
Hexane, other isomers		>= 45

according to the Hazardous Products Regulations

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SECTION 4. FIRST-AID MEASURES

General advice : Not expected to be a health hazard when used under normal

conditions.

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.

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.

Most important symptoms and effects, both acute and

delayed

Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death.

Skin irritation signs and symptoms may include a burning sen-

sation, redness, swelling, and/or blisters.

No specific hazards under normal use conditions.

Eye irritation signs and symptoms may include a burning sen-

sation, redness, swelling, and/or blurred vision.

If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest

congestion, shortness of breath, and/or fever.

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.

Peripheral nerve damage may be evidenced by impairment of motor function (incoordination, unsteady walk, or muscle weakness in the extremities, and/or loss of sensation in the

arms and legs).

Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance.

Protection of first-aiders : When administering first aid, ensure that you are wearing the

according to the Hazardous Products Regulations

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appropriate personal protective equipment according to the

incident, injury and surroundings.

Call a doctor or poison control center for guidance. Notes to physician

Potential for chemical pneumonitis.

Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Foam, water spray or fog. Dry chemical powder, carbon diox-

ide, sand or earth may be used for small fires only.

Unsuitable extinguishing

media

Do not use water in a jet.

Specific hazards during fire-

fighting

Clear fire area of all non-emergency personnel.

Hazardous combustion products may include:

A complex mixture of airborne solid and liquid particulates and

gases (smoke). Carbon monoxide.

Unidentified organic and inorganic compounds.

Flammable vapours may be present even at temperatures

below the flash point.

The vapour is heavier than air, spreads along the ground and

distant ignition is possible.

Will float and can be reignited on surface water.

Specific extinguishing meth-

ods

Standard procedure for chemical fires.

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).

Further information Keep adjacent containers cool by spraying with water.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec: : tive equipment and emer-

gency procedures

Observe all relevant local and international regulations. Notify authorities if any exposure to the general public or the

environment occurs or is likely to occur.

Local authorities should be advised if significant spillages

cannot be contained.

Avoid contact with skin, eyes and clothing.

Isolate hazard area and deny entry to unnecessary or unpro-

tected personnel.

Do not breathe fumes, vapour. Do not operate electrical equipment.

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Environmental precautions

Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment.

Monitor area with combustible gas indicator.

Methods and materials for containment and cleaning up

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.

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

Ventilate contaminated area thoroughly.

If contamination of site occurs remediation may require specialist advice.

Additional advice

For guidance on selection of personal protective equipment

see Section 8 of this Safety Data Sheet.

For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.

SECTION 7. HANDLING AND STORAGE

Technical measures

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 Section 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

according to the Hazardous Products Regulations

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material.

Ensure that all local regulations regarding handling and stor-

age facilities are followed.

Advice on safe handling

: Avoid inhaling vapour and/or mists.

Avoid contact with skin, eyes and clothing.

Extinguish any naked flames. Do not smoke. Remove ignition

sources. Avoid sparks.

Use local exhaust ventilation if there is risk of inhalation of

vapours, mists or aerosols.

Bulk storage tanks should be diked (bunded).

When using do not eat or drink.

The vapour is heavier than air, spreads along the ground and

distant ignition is possible.

Avoidance of contact

Strong oxidising agents.

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.

Refer to guidance under Handling section.

Conditions for safe storage

Refer to section 15 for any additional specific legislation cov-

ering the packaging and storage of this product.

Further information on storage stability

Storage Temperature:

Ambient.

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.

Must be stored in a diked (bunded) well- ventilated area, away from sunlight, ignition sources and other sources of heat. Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products which are not

harmful or toxic to man or to the environment.

Electrostatic charges will be generated during pumping.

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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 flamma-

ble.

Packaging material : Suitable material: For containers, or container linings use mild

steel, stainless steel., For container paints, use epoxy paint,

zinc silicate paint.

Unsuitable material: Avoid prolonged contact with natural,

butyl or nitrile rubbers.

Specific end use(s)

Specific use(s) : Not applicable

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

Components with workplace control parameters

Components	CAS-No.	Value type	Control parame-	Basis
		(Form of	ters / Permissible	
		exposure)	concentration	
Naphtha (petroleum), hy-	64742-49-0	TWA	500 ppm	OSHA Z-1
drotreated light			2,000 mg/m3	
		TWA (Mist)	5 mg/m3	OSHA Z-1
n-Hexane	110-54-3	TWA	50 ppm	CA AB OEL
			176 mg/m3	
		TWA	20 ppm	CA BC OEL
		TWAEV	50 ppm	CA QC OEL
			176 mg/m3	
		TWA	50 ppm	ACGIH

Biological occupational exposure limits

Components	CAS-No.	Control	Biological	Sam-	Permissible	Basis
		parameters	specimen	pling	concentra-	
				time	tion	
n-Hexane	110-54-3	2,5-	Urine	End of	0.5 mg/l	ACGIH
		Hexanedi-		shift		BEI
		one				

Biological occupational exposure limits

No biological limit allocated.

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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

Engineering measures

Use sealed systems as far as possible.

Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits.

Local exhaust ventilation is recommended.

Firewater monitors and deluge systems are recommended. Eye washes and showers for emergency use.

Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated. 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:

General Information

Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

Define procedures for safe handling and maintenance of controls.

Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.

Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.

Drain down system prior to equipment break-in or maintenance.

Retain drain downs in sealed storage pending disposal or subsequent recycle.

Personal protective equipment

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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 unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.

Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.

If air-filtering respirators are suitable for conditions of use: Select a filter suitable for organic gases and vapours [Type A

boiling point >65°C (149°F)].

Hand protection

Remarks Where hand contact with the product may occur the use of

gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. Longer term protection: Nitrile rubber gloves. Incidental contact/Splash protection: PVC or

neoprene rubber gloves.

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. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model. 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. 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.

Eye protection If material is handled such that it could be splashed into eyes,

protective eyewear is recommended.

Skin and body protection Wear chemical resistant gloves/gauntlets and boots. Where

risk of splashing, also wear an apron.

Wear antistatic and flame-retardant clothing, if a local risk

assessment deems it so.

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Protective measures : Personal protective equipment (PPE) should meet recom-

mended national standards. Check with PPE suppliers. The following information, while appropriate for the product is general in nature. The selection of Personal Protective Equipment will vary depending on the conditions of use.

Hygiene measures : Wash hands before eating, drinking, smoking and using the

toilet.

Launder contaminated clothing before re-use.

Do not ingest. If swallowed, then seek immediate medical

assistance.

Environmental exposure controls

General advice : Local guidelines on emission limits for volatile substances

must be observed for the discharge of exhaust air containing

vapour.

Minimise release to the environment. An environmental assessment must be made to ensure compliance with local envi-

ronmental legislation.

Information on accidental release measures are to be found in

section 6.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state : liquid

Colour : colourless

Odour : Paraffinic, sweet

Odour Threshold : Data not available

Melting / freezing point : -95 °C

Initial boiling point and boiling :

range

Typical 63 - 79 °C

Flammability (solid, gas) : Not applicable

Upper explosion limit / Upper

flammability limit

Upper flammability limit

7.4 %(V)

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Lower explosion limit / Lower : Lower flammability limit

flammability limit

1.1 %(V)

Flash point -27 °C

Method: IP 170

: 375 °C Auto-ignition temperature

Method: ASTM E-659

Decomposition temperature Not applicable

рΗ Not applicable

Viscosity

Viscosity, dynamic Data not available

Typical 0.45 mm2/s (25 °C) Viscosity, kinematic

Method: ASTM D445

Solubility(ies)

Water solubility 9.5 mg/l

Partition coefficient: n-

octanol/water

: log Pow: 4

Vapour pressure Typical 8,000 Pa (0 °C)

Typical 19,000 Pa (20 °C)

Typical 58,500 Pa (50 °C)

Relative density 0.66

Method: ASTM D4052

Density Typical 670 - 675 kg/m3 (15 °C)

Method: ASTM D4052

Relative vapour density 2.8

Particle characteristics

Data not available Particle size

according to the Hazardous Products Regulations

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9.2 Other information

Not applicable **Explosives**

Data not available Oxidizing properties

Evaporation rate 1.4

Method: DIN 53170, di-ethyl ether=1

Method: ASTM D 3539, nBuAc=1

0.04 pS/m at 20 °C Conductivity

Method: ASTM D-4308

Low conductivity: < 100 pS/m

The conductivity of this material makes it a static accumulator., A liquid is typically considered nonconductive if its con-

ductivity 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 semi-conductive, 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

18.5 mN/m, 20 °C, ASTM D-971 Surface tension

Molecular weight 86 g/mol

SECTION 10. STABILITY AND REACTIVITY

Reactivity The product does not pose any further reactivity hazards in

addition to those listed in the following sub-paragraph.

Chemical stability No hazardous reaction is expected when handled and stored

according to provisions

Stable under normal conditions of use.

tions

Possibility of hazardous reac- : Reacts with strong oxidising agents.

according to the Hazardous Products Regulations

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Conditions to avoid : Avoid heat, sparks, open flames and other ignition sources.

In certain circumstances product can ignite due to static elec-

tricity.

Incompatible materials : Strong oxidising agents.

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 degra-

dation.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment : Information given is based on product testing, and/or similar

products, and/or components.

Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual com-

ponent(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 : LD50 (Rat): Remarks: Low toxicity

Acute inhalation toxicity : LC50 (Rat): > 20 mg/l

Remarks: Low toxicity by inhalation.

Acute dermal toxicity : LD50 (Rabbit): Remarks: Low toxicity

Components:

Naphtha (petroleum), hydrotreated light:

Acute oral toxicity : LD50 (Rat): > 5000 mg/kg

Remarks: Low toxicity

Acute inhalation toxicity : LC50 (Rat): > 20 mg/l

Remarks: Low toxicity by inhalation.

Acute dermal toxicity : LD50 (Rabbit): > 2000 mg/kg

Remarks: Low toxicity

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Skin corrosion/irritation

Product:

Remarks : Causes skin irritation.

Repeated exposure may cause skin dryness or cracking.

Components:

Naphtha (petroleum), hydrotreated light:

Remarks : Causes skin irritation.

Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation

Product:

Remarks : Not irritating to eye.

Vapours may be irritating to the eye.

Components:

Naphtha (petroleum), hydrotreated light:

Remarks : Not irritating to eye.

Vapours may be irritating to the eye.

Respiratory or skin sensitisation

Product:

Remarks : Not a sensitiser.

Based on available data, the classification criteria are not met.

Components:

Naphtha (petroleum), hydrotreated light:

Remarks : Not a sensitiser.

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Product:

Genotoxicity in vivo : Remarks: Not mutagenic.

Components:

Naphtha (petroleum), hydrotreated light:

Genotoxicity in vivo : Remarks: Not mutagenic.

Carcinogenicity

Product:

according to the Hazardous Products Regulations

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Remarks : Tumours produced in animals are not considered relevant to

humans.

Not a carcinogen.

Based on available data, the classification criteria are not met.

Components:

Naphtha (petroleum), hydrotreated light:

Remarks : Tumours produced in animals are not considered relevant to

humans.

Not a carcinogen.

Based on available data, the classification criteria are not met.

IARC No component of this product present at levels greater than or equal to 0.1% is

identified as probable, possible or confirmed human carcinogen by IARC.

OSHANo component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Remarks : Suspected of damaging fertility or the unborn child.

Causes foetotoxicity in animals at doses which are maternally

toxic.

Affects reproductive system in animals at doses which pro-

duce other toxic effects.

STOT - single exposure

Product:

Remarks : May cause drowsiness and dizziness.

Components:

Naphtha (petroleum), hydrotreated light:

Remarks : May cause drowsiness and dizziness.

STOT - repeated exposure

Product:

Remarks : Central nervous system: repeated exposure affects the nerv-

ous system.

Peripheral nervous system: causes peripheral neuropathy

which can be potentiated by ketones.

Kidney: caused kidney effects in male rats which are not con-

sidered relevant to humans

according to the Hazardous Products Regulations

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Components:

Naphtha (petroleum), hydrotreated light:

Remarks : Central nervous system: repeated exposure affects the nerv-

ous system.

Peripheral nervous system: causes peripheral neuropathy

which can be potentiated by ketones.

Kidney: caused kidney effects in male rats which are not con-

sidered relevant to humans

Aspiration toxicity

Product:

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

Components:

Naphtha (petroleum), hydrotreated light:

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

Further information

Product:

Remarks : Classifications by other authorities under varying regulatory

frameworks may exist.

Components:

Naphtha (petroleum), hydrotreated light:

Remarks : Classifications by other authorities under varying regulatory

frameworks may exist.

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment : Incomplete ecotoxicological data are available for this product.

The information given below is based partly 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).

Ecotoxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other :

according to the Hazardous Products Regulations

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aquatic invertebrates Remarks: Toxic

 $LL/EL/IL50 > 1 \le 10 \text{ mg/l}$

Toxicity to algae/aquatic

plants

Remarks: Harmful

LL/EL/IL50 >10 <= 100 mg/l

Toxicity to fish (Chronic tox-

icity)

Remarks: Data not available

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

Remarks: Data not available

Toxicity to microorganisms

Remarks: Data not available

Components:

Naphtha (petroleum), hydrotreated light:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other :

aquatic invertebrates

Remarks: Toxic

 $LL/EL/IL50 > 1 \le 10 \text{ mg/l}$

Toxicity to algae/aquatic

plants

Remarks: Harmful

LL/EL/IL50 >10 <= 100 mg/l

Toxicity to fish (Chronic tox-

citv

Remarks: Data not available

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

Remarks: Data not available

Toxicity to microorganisms : Remarks: Data not available

Persistence and degradability

Product:

Biodegradability : Remarks: Readily biodegradable.

Oxidises rapidly by photo-chemical reactions in air.

Components:

Naphtha (petroleum), hydrotreated light:

Biodegradability : Remarks: Readily biodegradable.

Oxidises rapidly by photo-chemical reactions in air.

according to the Hazardous Products Regulations

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Bioaccumulative potential

Product:

Remarks: Has the potential to bioaccumulate. Bioaccumulation

Components:

Naphtha (petroleum), hydrotreated light:

Bioaccumulation : Remarks: Has the potential to bioaccumulate.

Mobility in soil

Product:

Remarks: Floats on water. Mobility

If it enters soil, it will adsorb to soil particles and will not be

mobile.

Components:

Naphtha (petroleum), hydrotreated light:

Mobility Remarks: Floats on water.

If it enters soil, it will adsorb to soil particles and will not be

mobile.

Other adverse effects

Product:

mation

Additional ecological infor- : Does not have ozone depletion potential.

Components:

Naphtha (petroleum), hydrotreated light:

Additional ecological infor-

: Does not have ozone depletion potential.

mation

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues 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 meth-

ods in compliance with applicable regulations.

Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Do not dispose into the environment, in drains or in water

courses.

according to the Hazardous Products Regulations

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Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination.

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.

Waste, spills or used product is dangerous waste.

Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Local regulations may be more stringent than regional or national requirements and must be complied with.

MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.

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.

Comply with any local recovery or waste disposal regulations.

SECTION 14. TRANSPORT INFORMATION

TDG

UN number : 1208
Proper shipping name : HEXANES

Class : 3
Packing group : II
Labels : 3
Marine pollutant : no

International Regulations

IATA-DGR

UN/ID No. : UN 1208
Proper shipping name : HEXANES

Class : 3
Packing group : II
Labels : 3

IMDG-Code

UN number : UN 1208
Proper shipping name : HEXANES

Class : 3

according to the Hazardous Products Regulations

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Packing group : II
Labels : 3
Marine pollutant : yes

Maritime transport in bulk according to IMO instruments

Pollution category : Y Ship type : 2

Product name : Hexane (all isomers)

Special precautions for user

Remarks : Special Precautions: Refer to Section 7, Handling & Storage,

for special precautions which a user needs to be aware of or

needs to comply with in connection with transport.

Additional Information: This product may be transported under nitrogen blanketing.

Nitrogen is an odourless and invisible gas. Exposure to nitrogen enriched atmospheres displaces available oxygen which may cause asphyxiation or death. Personnel must observe strict safety precautions when involved with a confined space

entry.

Transport in bulk according to Annex II of Marpol and the IBC

Code

SECTION 15. REGULATORY INFORMATION

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

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

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

The components of this product are reported in the following inventories:

DSL : Listed

IECSC : Listed

KECI : Listed

PICCS : Listed

TSCA : Listed

TCSI : Listed

ENCS : Listed

NZIoC : Listed

according to the Hazardous Products Regulations

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SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)

CA AB OEL : Canada. Alberta, Occupational Health and Safety Code (table

2: OEL)

CA BC OEL : Canada. British Columbia OEL

CA QC OEL : Québec. Regulation respecting occupational health and safe-

ty, Schedule 1, Part 1: Permissible exposure values for air-

borne contaminants

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim-

its for Air Contaminants

ACGIH / TWA : 8-hour, time-weighted average CA AB OEL / TWA : 8-hour Occupational exposure limit CA BC OEL / TWA : 8-hour time weighted average

CA QC OEL / TWAEV : Time-weighted average exposure value

OSHA Z-1 / TWA : 8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods: vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

A vertical bar (|) in the left margin indicates an amendment from the previous version.

according to the Hazardous Products Regulations

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Sources of key data used to : Th

compile the Safety Data

Sheet

The quoted data are from, but not limited to, one or more sources of information (e.g. toxicological data from Shell Health Services, material suppliers' data, CONCAWE, EU

IUCLID date base, EC 1272 regulation, etc).

Revision Date : 2025-05-16 Date format : mm/dd/yyyy

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

CA / EN