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

Product name : SBP 40/65 LNH

Product code : Q5113

CAS-No. : 64742-49-0

Synonyms : Hydrocarbons, C6, Isoalkanes, <5% n-hexane and n-pentane

Manufacturer or supplier's details

Manufacturer/Supplier : Shell Chemicals Europe B.V.

PO Box 2334 3000 CH Rotterdam

Netherlands

Telephone : +31 (0)10 441 5137 / +31 (0)10 441 5191 Telefax : +31 (0)20 716 8316 / +31 (0)20 713 9230

Emergency telephone : +44 (0) 1235 239 670 (NCEC) This telephone number is

available 24 hours per day, 7 days per week 08 61555777

(Local Poison Centre)

Recommended use of the chemical and restrictions on use

Recommended use : Industrial Solvent.

Restrictions on use

This product must not be used in applications other than the

above without first seeking the advice of the supplier.

2. HAZARDS IDENTIFICATION

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids : Category 2 Skin irritation : Category 2

Specific target organ toxicity - : Category 3 (Narcotic effects)

single exposure

Aspiration hazard : Category 1 Long-term (chronic) aquatic : Category 2

hazard

number

Label elements

Hazard pictograms :









Signal word : Danger

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Hazard statements : PHYSICAL HAZARDS:

H225 Highly flammable liquid and vapour.

HEALTH HAZARDS: H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H304 May be fatal if swallowed and enters airways.

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.

P243 Take action to prevent static discharges.

P280 Wear protective gloves/ protective clothing/ eye

protection/ face protection.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off

immediately all contaminated clothing. Rinse skin with water/

shower.

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

keep comfortable for breathing.

P301 + P310 IF SWALLOWED: Immediately call a POISON

CENTER/ doctor.

P331 Do NOT induce vomiting.

Storage:

No precautionary phrases.

Disposal:

No precautionary phrases.

Other hazards

No specific hazards under normal use conditions.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture Mixture

Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (% w/w)
Hydrocarbons, C6, isoalkanes, <5% n-hexane	Not Assigned	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 Aquatic Chronic 2; H411	<= 70
pentane	109-66-0	Flam. Liq. 1; H224	<= 70

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	Asp. Tox. 1; H304 STOT SE 3; H336 Aquatic Chronic 2; H411 EUH066	

For explanation of abbreviations see section 16.

Further information

Contains:

Chemical name	Identification number	Concentration (% w/w)
n-Hexane	110-54-3	>= 0 - < 5

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, lightheadedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death.

Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters.

No specific hazards under normal use conditions. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.

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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.

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.

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

Potential for chemical pneumonitis.

Treat symptomatically.

Causes central nervous system depression.

5. FIRE-FIGHTING MEASURES

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 water in a jet.

Specific hazards during

firefighting

: 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

methods

Standard procedure for chemical fires.

Keep adjacent containers cool by spraying with water.

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).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and

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

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emergency procedures

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

unprotected personnel.

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

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.

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 quidance 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 material.

Ensure that all local regulations regarding handling and

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storage 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.

: Even with proper grounding and bonding, this material can still **Product Transfer**

> 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.

Storage

Conditions for safe storage : Refer to section 15 for any additional specific legislation

covering the packaging and storage of this product.

Other data : 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. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment

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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.

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.

Container Advice : Do not cut, drill, grind, weld or perform similar operations on or

near containers.

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

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Isohexanes	Not Assigned	TWA	900 mg/m3	OEL based on European Hydrocarbon Solvents Producers (CEFIC- HSPA) methodology.
pentane	109-66-0	OEL-RL	2.000 ppm	ZA OEL
	Further information: Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents			
n-Hexane	110-54-3	OEL-RL	100 ppm	ZA OEL
	Further information: danger of cutaneous absorption, Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents			

Biological occupational exposure limits

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentratio	Basis
n-Hexane	110-54-3	2,5- Hexanedion	Urine	End of shift at	0,4 mg/l	ZA BEI

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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.

Eye washes and showers for emergency use.

Firewater monitors and deluge systems are recommended. 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

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 for subsequent recycle.

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Personal protective equipment

Protective measures

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

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 AX 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: Viton. Incidental contact/Splash protection: Nitrile rubber. PVC. 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 shortterm/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 : Wear goggles for use against liquids and gas.

If a local risk assessment deems it so then chemical splash Eye protection

goggles may not be required and safety glasses may provide

adequate eye protection.

Skin and body protection : Chemical resistant gloves/gauntlets, boots, and apron.

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Protective clothing approved to EU Standard EN14605.

Thermal hazards : Not applicable

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

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

environmental legislation.

Information on accidental release measures are to be found in

section 6.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid.

Colour : colourless Odour : Paraffinic

Odour Threshold : Data not available рΗ : Not applicable

: Typical -150 °C / -238 °F pour point

Melting point/range Data not available

Boiling point/boiling range : Typical 44 - 62 °C / 111 - 144 °F

Flash point : Typical -43 °C / -45 °F

Method: IP 170

Evaporation rate : 9.6

Method: ASTM D 3539, nBuAc=1

Method: DIN 53170, di-ethyl ether=1

Flammability (solid, gas) : Data not available

Upper explosion limit : 7,5 %(V)

Lower explosion limit : 1,1 %(V)

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Vapour pressure : 16 kPa (0 °C / 32 °F)

33 kPa (20 °C / 68 °F)

115 kPa (50 °C / 122 °F)

Relative vapour density

: Data not available Relative density

Density : Typical 658 kg/m3 (15 °C / 59 °F)

Method: ASTM D4052

Solubility(ies)

Water solubility : insoluble

Solubility in other solvents : Data not available

Partition coefficient: n-

octanol/water

: log Pow: 1,1 - 7,5

Auto-ignition temperature : 392 °C / 738 °F

Decomposition temperature : Data not available

Viscosity

Viscosity, dynamic : Data not available

Viscosity, kinematic Typical 0,41 mm2/s (25 °C / 77 °F)

Method: ASTM D445

Typical 0,57 mm2/s (0 °C / 32 °F)

Method: ASTM D445

Explosive properties : In use may form flammable/explosive vapour-air mixture.

Oxidizing properties : Not applicable

Surface tension : Typical 16,8 mN/m, 20 °C / 68 °F, ASTM D-971

Conductivity : < 0.09 pS/m at 20 °C / 68 °F

> 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 conductivity is below 100 pS/m and is considered semiconductive if its conductivity is below 10,000 pS/m., A number of factors, for example liquid temperature, presence of

contaminants, and anti-static additives can greatly influence

the conductivity of a liquid

Particle size : Data not available

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Molecular weight : 82 g/mol

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.

Possibility of hazardous

reactions

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

: Reacts with strong oxidising agents.

In certain circumstances product can ignite due to static

electricity.

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

degradation.

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 component(s).

exposure

Information on likely routes of : Exposure may occur via inhalation, ingestion, skin absorption,

skin or eye contact, and accidental ingestion.

Acute toxicity

Components:

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

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

Remarks: Low toxicity

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

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Acute inhalation toxicity : LC 50 Rat: > 20 mg/l

Remarks: Low toxicity by inhalation.

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

Acute dermal toxicity : LD 50 Rabbit: 2.000 mg/kg

Remarks: Low toxicity

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

pentane:

Acute oral toxicity : LD50 Rat, male and female: > 5.000 mg/kg

Method: OECD Test Guideline 401

Remarks: Based on available data, the classification criteria

are not met.

Acute inhalation toxicity : LC50 Rat, male and female: > 20 mg/l

Exposure time: 4 h
Test atmosphere: vapour

Method: OECD Test Guideline 403

Remarks: Based on available data, the classification criteria

are not met.

Skin corrosion/irritation

Components:

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Remarks: Causes skin irritation.

pentane:

Species: Rabbit

Method: Test(s) equivalent or similar to OECD Test Guideline 404

Remarks: Slightly irritating to skin., Insufficient to classify.

Serious eye damage/eye irritation

Components:

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Remarks: Not irritating to eye.

pentane:

Species: Rabbit

Method: OECD Test Guideline 405

Remarks: Slightly irritating., Insufficient to classify.

Respiratory or skin sensitisation

Components:

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Remarks: Not a sensitiser.

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

pentane:

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Species: Guinea pig

Method: OECD Test Guideline 406

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

Germ cell mutagenicity

Components:

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Remarks: Not mutagenic.

Germ cell mutagenicity-

Assessment

: This product does not meet the criteria for classification in

categories 1A/1B.

pentane:

Method: Test(s) equivalent or similar to OECD Guideline 471 Remarks: Based on available data, the classification criteria

are not met.

Method: Directive 67/548/EEC, Annex V, B.10.

Remarks: Based on available data, the classification criteria

are not met.

Test species: RatMethod: Directive 67/548/EEC, Annex V,

B.12.

Remarks: Based on available data, the classification criteria

are not met.

Carcinogenicity

Components:

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Remarks: Tumours produced in animals are not considered relevant to humans., Not a carcinogen., Based on available data, the classification criteria are not met.

Carcinogenicity - : This product does not meet the criteria for classification in

Assessment categories 1A/1B.

Material	GHS/CLP Carcinogenicity Classification
Hydrocarbons, C6, isoalkanes, <5% n-hexane	No carcinogenicity classification.
pentane	No carcinogenicity classification.
n-Hexane	No carcinogenicity classification.

Reproductive toxicity

Components:

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Remarks: Not a developmental toxicant., Does not impair

fertility.

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Reproductive toxicity -

Assessment

: This product does not meet the criteria for classification in

categories 1A/1B.

pentane:

Species: Rat

Sex: male and female Application Route: Inhalation

Method: Equivalent or similar to OECD Test Guideline 416 Remarks: Based on available data, the classification criteria

are not met.

Effects on foetal development

: Species: Rat, female Application Route: Oral

Method: OECD Test Guideline 414

Remarks: Based on available data, the classification criteria

are not met.

STOT - single exposure

Components:

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Remarks: May cause drowsiness or dizziness.

pentane:

Exposure routes: Inhalation

Target Organs: Central nervous system Remarks: May cause drowsiness or dizziness.

STOT - repeated exposure

Components:

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

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

pentane:

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

Repeated dose toxicity

Components:

pentane:

Rat, male and female: Application Route: Inhalation Test atmosphere: Gas

Method: OECD Test Guideline 413

Target Organs: No specific target organs noted

Aspiration toxicity

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Components:

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

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

pentane:

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

Further information

Components:

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

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

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

pentane:

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

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

Components:

Hydrocarbons, C6, isoalkanes, <5% n-hexane :

Toxicity to fish (Acute : Remarks: Data not available

toxicity)

Toxicity to crustacean (Acute

toxicity)

: Remarks: LL/EL/IL50 > 1 <= 10 mg/l

Toxicity to algae/aquatic : Remarks: Toxic

plants (Acute toxicity) LC/EC/IC50 >10 - <=100 mg/l

Toxicity to microorganisms

(Acute toxicity)

: Remarks: Data not available

Toxicity to fish (Chronic

Toxicity to fish (Acute

: Remarks: Data not available

toxicity)

Toxicity to : Remarks: Data not available

crustacean(Chronic toxicity)

pentane:

: LC50 (Oncorhynchus mykiss (rainbow trout)): 4,26 mg/l

toxicity) Exposure time: 96 h

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Method: OECD Test Guideline 203

Remarks: Toxic

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

Toxicity to crustacean (Acute

toxicity)

: EC50 (Daphnia magna (Water flea)): 2,7 mg/l

Exposure time: 48 h

Method: Test(s) equivalent or similar to OECD Guideline 202

Remarks: Toxic

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

Toxicity to algae/aquatic

plants (Acute toxicity)

: EC50 (Scenedesmus capricornutum (fresh water algae)): 10,7

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Harmful

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

Toxicity to microorganisms

(Acute toxicity)

: NOEL (Tetrahymena pyriformis): 23,7 mg/l

Exposure time: 48 h

Method: Based on quantitative structure-activity relationship

(QSAR) modelling

Remarks: NOEC/NOEL >100 mg/l

Toxicity to fish (Chronic

toxicity)

: NOELR: 6,165 mg/l Exposure time: 28 d

Species: Oncorhynchus mykiss (rainbow trout)

Method: Based on quantitative structure-activity relationship

(QSAR) modelling

Remarks: NOEC/NOEL > 1.0 - <= 10 mg/l

Toxicity to

crustacean(Chronic toxicity)

NOELR: 10,76 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea)

Method: Based on quantitative structure-activity relationship

(QSAR) modelling

Remarks: no data available

Persistence and degradability

Components:

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Biodegradability : Remarks: Readily biodegradable.

Oxidises rapidly by photo-chemical reactions in air.

pentane:

Biodegradability : Biodegradation: 87 %

Exposure time: 28 d

Method: Test(s) equivalent or similar to OECD Guideline 301

F

Remarks: Readily biodegradable.

Oxidises rapidly by photo-chemical reactions in air.

Bioaccumulative potential

Product:

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Partition coefficient: n-: log Pow: 1,1 - 7,5

octanol/water **Components:**

Hydrocarbons, C6, isoalkanes, <5% n-hexane:

Bioaccumulation : Remarks: Has the potential to bioaccumulate.

pentane:

: Species: Pimephales promelas (fathead minnow) Bioaccumulation

Bioconcentration factor (BCF): 171

Method: Based on quantitative structure-activity relationship

(QSAR) modelling

Remarks: Does not bioaccumulate significantly.

Mobility in soil

Components:

Hydrocarbons, C6, isoalkanes, <5% n-hexane :

Mobility : Remarks: Floats on water., If it enters soil, it will adsorb to soil

particles and will not be mobile.

pentane:

Mobility : Remarks: Floats on water., If the product enters soil, one or

more constituents will or may be mobile and may contaminate

groundwater.

Other adverse effects

Components:

Hydrocarbons, C6, isoalkanes, <5% n-hexane :

Results of PBT and vPvB

assessment

: The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not

considered to be PBT or vPvB.

Additional ecological

information pentane:

: Does not have ozone depletion potential.

Results of PBT and vPvB

assessment

: The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not

considered to be PBT or vPvB.

Additional ecological

information

: In view of the high rate of loss from solution, the product is

unlikely to pose a significant hazard to aquatic life.

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 methods 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

Do not dispose of tank water bottoms by allowing them to

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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.

14. TRANSPORT INFORMATION

International Regulations

ADR

UN number : 1268

Proper shipping name : PETROLEUM DISTILLATES, N.O.S.

Class : 3
Packing group : II
Labels : 3
Hazard Identification Number : 33
Environmentally hazardous : yes

IATA-DGR

UN/ID No. : UN 1268

Proper shipping name : Petroleum distillates, n.o.s.

Class : 3
Packing group : II
Labels : 3

IMDG-Code

UN number : UN 1268

Proper shipping name : PETROLEUM DISTILLATES, N.O.S.

(NAPHTHA)

Class : 3 Packing group : II

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Labels : 3 Marine pollutant : yes

Maritime transport in bulk according to IMO instruments

Pollution category : Not applicable
Ship type : Not applicable
Product name : Not applicable

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.

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.

Other international regulations

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

AIIC Listed DSL Listed **IECSC** Listed **ENCS** Listed KECI Listed **NZIoC** Listed **PICCS** Listed **TSCA** Listed TCSI Listed

16. OTHER INFORMATION

Full text of H-Statements

EUH066 Repeated exposure may cause skin dryness or cracking.

H224 Extremely flammable liquid and vapour. H225 Highly flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Chronic Long-term (chronic) aquatic hazard

Asp. Tox. Aspiration hazard Flam. Liq. Flammable liquids Skin Irrit. Skin irritation

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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.

SDS Regulation : Regulation 1907/2006/EC

Further information

Training advice : Provide adequate information, instruction and training for

operators.

Other information : A vertical bar (|) in the left margin indicates an amendment

from the previous version.

Sources of key data used to 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).

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.