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

Product name : Shell GTL Fluids G80

Product code : Q6580

CAS-No. : 1437281-03-2

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 (This telephone number is available 24

number hours per day, 7 days per week)

Recommended use of the chemical and restrictions on use

Recommended use :

Synthetic drilling base fluid., Feedstock in chemical industry.,

Solvent.

Restrictions on use : This product must not be used in applications other than those

listed in Section 1 without first seeking the advice of the

supplier.

2. HAZARDS IDENTIFICATION

Classification (REGULATION (EC) No 1272/2008)

Aspiration hazard : Category 1

Label elements

Hazard pictograms

Signal word : Danger

Hazard statements : PHYSICAL HAZARDS:

Not classified as a physical hazard according to CLP criteria.

HEALTH HAZARDS:

H304 May be fatal if swallowed and enters airways.

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ENVIRONMENTAL HAZARDS:

Not classified as environmental hazard according to CLP

criteria.

Supplemental Hazard

Statements

: EUH066 Repeated exposure may cause skin

dryness or cracking.

Precautionary statements : Prevention:

P243 Take action to prevent static discharges.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON

CENTER/ doctor.

P331 Do NOT induce vomiting.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

Other hazards

May ignite on surfaces at temperatures above auto-ignition temperature. Vapour in the headspace of tanks and containers may ignite and explode at temperatures exceeding autoignition temperature, where vapour concentrations are within the flammability range. This material is a static accumulator. Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture Substance

Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (% w/w)
Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched and linear)	1437281-03-2	Asp. Tox. 1; H304 EUH066	<= 100

Refer to Chapter 8 for Occupational Exposure Guidelines.

For explanation of abbreviations see section 16.

4. FIRST-AID MEASURES

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

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		conditions.	
If inhaled	: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.		
In case of skin contact	:	: Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.	
In case of eye contact	:	Flush eye with copious quantities of wa Remove contact lenses, if present and rinsing. If persistent irritation occurs, obtain me	easy to do. Continue
If swallowed	:	Call emergency number for your location of swallowed, do not induce vomiting: transportaneously, keep head below hips to lift any of the following delayed signs and within the next 6 hours, transport to the facility: fever greater than 101° F (38.3° breath, chest congestion or continued of	ansport to nearest If vomiting occurs o prevent aspiration. d symptoms appear nearest medical CC), shortness of
Most important symptoms and effects, both acute and delayed	:	Not considered to be an inhalation haza conditions of use.	ard under normal
,		No specific hazards under normal use of	conditions.
		Defatting dermatitis signs and symptom burning sensation and/or a dried/cracket	
		If material enters lungs, signs and sympoughing, choking, wheezing, difficulty congestion, shortness of breath, and/or If any of the following delayed signs and within the next 6 hours, transport to the facility: fever greater than 101° F (38.3° breath, chest congestion or continued of	in breathing, chest fever. d symptoms appear nearest medical C), shortness of
Protection of first-aiders	:	When administering first aid, ensure the appropriate personal protective equipm incident, injury and surroundings.	
Notes to physician	:	Treat symptomatically. Call a doctor or poison control center for Potential for chemical pneumonitis. Do not induce vomiting.	or guidance.

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point : 83,5 °C / 182,3 °F

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Ignition temperature

200 °C / 392 °F

Upper explosion limit : 7 %(V)

Lower explosion limit : 0,5 %(V)

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.

Specific extinguishing

methods

: Use extinguishing measures that are appropriate to local

circumstances and the surrounding environment.

Further information : 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 emergency procedures

: Observe all relevant local and international regulations. Local authorities should be advised if significant spillages

cannot be contained.

Notify authorities if any exposure to the general public or the

environment occurs or is likely to occur. Avoid contact with skin, eyes and clothing.

Do not breathe fumes, vapour.

Evacuate the area of all non-essential personnel. Take precautionary measures against static discharges.

Shut off leaks, if possible without personal risks. Remove all **Environmental precautions**

possible sources of ignition in the surrounding area. Use

appropriate containment to avoid environmental

contamination. Prevent from spreading or entering drains,

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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.

Methods and materials for containment and cleaning up

: 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 Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers. 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.

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

7. HANDLING AND STORAGE

General Precautions : Avoid breathing of or direct contact with material. Only use in

this Safety Data Sheet.

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 material.

Ensure that all local regulations regarding handling and

storage facilities are followed.

For comprehensive advice on handling, product transfer, storage and tank cleaning refer to the product supplier.

Advice on safe handling

: Avoid inhaling vapour and/or mists.

Avoid prolonged or repeated contact with skin.

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.

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

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> 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.

Refer to guidance under Handling section.

Storage

Other data

: Drum and small container storage:

Drums should be stacked to a maximum of 3 high. Use properly labeled and closable containers.

Must be stored in a diked (bunded) well- ventilated area, away from sunlight, ignition sources and other sources of heat. Tank storage:

Tanks must be specifically designed for use with this product. Bulk storage tanks should be diked (bunded).

Locate tanks away from heat and other sources of ignition. Cleaning, inspection and maintenance of storage tanks is a specialist operation, which requires the implementation of strict procedures and precautions.

Electrostatic charges will be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment to reduce the risk.

The vapours in the head space of the storage vessel may lie in the flammable/explosive range and hence may be

Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

Packaging material

: Suitable material: Examples of suitable materials are: high density polyethylene (HDPE), polypropylene (PP), and Viton (FKM), which have been specifically tested for compatibility with this product., For container linings, use amine-adduct cured epoxy paint., For seals and gaskets use: graphite, PTFE, Viton A, Viton B.

Unsuitable material: Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Examples of materials to avoid are: natural rubber (NR), nitrile rubber (NBR), ethylene propylene rubber (EPDM), polymethyl methacrylate (PMMA), polystyrene, polyvinyl chloride (PVC), polyisobutylene., However, some may be suitable for glove materials.

Container Advice

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

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near containers. Containers, even those that have been

emptied, can contain explosive vapours.

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

Biological occupational exposure limits

No biological limit allocated.

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

: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances.

Appropriate measures include:

Use sealed systems as far as possible.

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

Local exhaust ventilation is recommended. Eye washes and showers for emergency use.

General Information:

Always observe good personal hygiene measures, such as

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> 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 for subsequent recycle.

Do not ingest. If swallowed, then seek immediate medical assistance.

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.

Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P 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. When prolonged or frequent repeated contact occurs. Nitrile rubber. For incidental contact/splash protection - Neoprene 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 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

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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.

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 : Skin protection is not required under normal conditions of use.

For prolonged or repeated exposures use impervious clothing

over parts of the body subject to exposure.

If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to relevant Standard,

and provide employee skin care programmes.

Thermal hazards : Not applicable

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 : hydrocarbon-like
Odour Threshold : Data not available
pH : Not applicable
Melting point/freezing point : no data available

Boiling point/boiling range : 210 - 260 °C / 410 - 500 °F

Flash point : 83,5 °C / 182,3 °F

Evaporation rate : Data not available

Upper explosion limit : 7 %(V)

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Lower explosion limit : 0,5 %(V)

Vapour pressure : Data not available (50 °C / 122 °F)

Relative vapour density : Data not available

Relative density : < 0,8

Density : $< 800 \text{ kg/m} 3 (15 ^{\circ}\text{C} / 59 ^{\circ}\text{F})$

Solubility(ies)

Water solubility : insoluble

Solubility in other solvents : Data not available

Partition coefficient: n-

octanol/water

: $\log Pow: > 5,5$

Auto-ignition temperature : > 200 °C / 392 °F

Decomposition temperature : no data available

Viscosity

Viscosity, dynamic : Data not available

Viscosity, kinematic : < 2 mm2/s (25 °C / 77 °F)

Explosive properties : Not applicable

Oxidizing properties : Not applicable

Surface tension : Data not available

Conductivity: < 100 pS/m, The conductivity of this material

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

liquid

Molecular weight : Data not available

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

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according to provisions

Possibility of hazardous

reactions

: Reacts with strong oxidising agents.

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

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.

11. TOXICOLOGICAL INFORMATION

Basis for assessment : Information given is based on product data, a knowledge of

the components and the toxicology of similar products.

exposure

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

skin or eye contact, and accidental ingestion.

Acute toxicity

Product:

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

Remarks: Low toxicity

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

Acute inhalation toxicity : LC 50 Rat: > 5 mg/l

Exposure time: 4 h

Remarks: Low toxicity if inhaled.

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

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

Remarks: Low toxicity

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

Components:

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched

and linear):

: LD 50 Rat, male and female: > 5.000 mg/kg Acute oral toxicity

Method: OECD Test Guideline 401

Remarks: Based on available data, the classification criteria

are not met.

: LC 50 Rat, male and female: > 2 -<= 10 mg/l Acute inhalation toxicity

> Exposure time: 4 h Test atmosphere: vapour

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

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Remarks: LC50 greater than near-saturated vapour

concentration.

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

Acute dermal toxicity : LD 50 Rat, male and female: > 2.000 mg/kg

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

402

Remarks: Based on available data, the classification criteria

are not met.

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.

Components:

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched and linear):

Species: Rabbit

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

Remarks: Moderately irritating to skin (but insufficient to classify)., Prolonged/repeated contact

may cause defatting of the skin which can lead to dermatitis.

Serious eye damage/eye irritation

Product:

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

Components:

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched and linear):

Species: Rabbit

Method: OECD Test Guideline 405

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

Respiratory or skin sensitisation

Product:

Remarks: Not a sensitiser.

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

Components:

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched and linear):

Species: Guinea pig

Method: OECD Test Guideline 406

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

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Germ cell mutagenicity

Product:

Remarks: Non mutagenic

Components:

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched and linear):

Method: Test(s) equivalent or similar to OECD Guideline 471 Remarks: Based on available data, the classification criteria are not met.

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

473

Remarks: Based on available data, the classification criteria

are not met.

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

476

Remarks: Based on available data, the classification criteria

are not met.

Test species: MouseMethod: Test(s) equivalent or similar to

OECD Test Guideline 474

Remarks: Based on available data, the classification criteria

are not met.

Germ cell mutagenicity-

Assessment

: This product does not meet the criteria for classification in

categories 1A/1B.

Carcinogenicity

Product:

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

Components:

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched and linear):

Species: Rat, (male and female) Application Route: Inhalation

Method: Test(s) equivalent or similar to OECD Test Guideline 453

Remarks: Weight of evidence does not support classification as a carcinogen

Species: Mouse, (male and female)
Application Route: Inhalation

Method: Test(s) equivalent or similar to OECD Test Guideline 453

Remarks: Weight of evidence does not support classification as a carcinogen

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

Assessment categories 1A/1B.

Material	GHS/CLP Carcinogenicity Classification
Hydrocarbons, C12-C15, n-	No carcinogenicity classification.

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alkanes, isoalkanes, < 2%
aromatics (Alkanes, C12-15-
branched and linear)

Reproductive toxicity

Product:

Remarks: Not a developmental toxicant., Based on available data, the classification criteria are not met., Does not impair fertility.

Components:

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched and linear):

Species: Rat

Sex: male and female Application Route: Oral

Method: OECD Test Guideline 416

Remarks: Based on available data, the classification criteria

are not met.

Effects on foetal : Species: Rat, female development : Application Route: Oral

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

414

Remarks: Based on available data, the classification criteria

are not met.

Species: Rat, female

Application Route: Inhalation

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

414

Remarks: Based on available data, the classification criteria

are not met.

Reproductive toxicity -

: This product does not meet the criteria for classification in categories 1A/1B.

Assessment

STOT - single exposure

Product:

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

Components:

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched and linear):

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

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STOT - repeated exposure

Product:

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

Components:

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched and linear):

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

Repeated dose toxicity

Components:

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched and linear):

Rat, male and female: Application Route: Oral

Method: Test(s) equivalent or similar to OECD Test Guideline 408

Target Organs: No specific target organs noted

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

Method: Test(s) equivalent or similar to OECD Test Guideline 413

Target Organs: No specific target organs noted

Aspiration toxicity

Product:

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

Components:

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched and linear):

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:

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched and linear):

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

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12. ECOLOGICAL INFORMATION

Basis for assessment : Ecotoxicological data have not been determined specifically

for this product.

Information given is based on a knowledge of the components

and the ecotoxicology of similar products.

Ecotoxicity

Product:

Toxicity to fish (Acute

toxicity)

Remarks: LL/EL/IL50 > 100 mg/l

Practically non toxic:

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

Toxicity to crustacean (Acute

toxicity)

Remarks: LL/EL/IL50 > 100 mg/l

Practically non toxic:

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

Toxicity to algae/aquatic

plants (Acute toxicity)

Remarks: LL/EL/IL50 > 100 mg/l

Practically non toxic:

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

Toxicity to fish (Chronic

toxicity)

: Remarks: NOEC/NOEL > 100 mg/l

Toxicity to crustacean

(Chronic toxicity)
Toxicity to microorganisms

(Acute toxicity)

: Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic:

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

: Remarks: NOEC/NOEL expected to be > 10 - <= 100 mg/l

Components:

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched and linear) :

Toxicity to fish (Acute

toxicity)

: LL50 (Oncorhynchus mykiss (rainbow trout)): > 1.000 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203 Remarks: Practically non toxic:

LL/EL/IL50 > 100 mg/l

Toxicity to crustacean (Acute

toxicity)

: EL50 (Daphnia magna (Water flea)): > 1.000 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202 Remarks: Practically non toxic:

LL/EL/IL50 > 100 mg/l

Toxicity to algae/aquatic plants (Acute toxicity)

: EL50 (Pseudokirchneriella subcapitata (algae)): > 1.000 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201 Remarks: Practically non toxic:

LL/EL/IL50 > 100 mg/l

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Toxicity to microorganisms

(Acute toxicity)

Toxicity to fish (Chronic

toxicity)

Toxicity to

crustacean(Chronic toxicity)

: Remarks: Data not available

: Remarks: Data not available

: Remarks: Data not available

Persistence and degradability

Product:

Biodegradability : Remarks: Major constituents are inherently biodegradable, but

> contains components that may persist in the environment., Based on available data, the classification criteria are not met., Not Persistent per IMO criteria., International Oil Pollution Compensation (IOPC) Fund definition: "A nonpersistent oil is oil, which, at the time of shipment, consists of hydrocarbon fractions, (a) at least 50% of which, by volume, distills at a temperature of 340°C (645°F) and (b) at least 95% of which, by volume, distils at a temperature of 370°C (700°F) when tested by the ASTM Method D-86/78 or any subsequent

revision thereof."

Components:

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched and linear):

Biodegradability : Biodegradation: 80 %

Exposure time: 28 d

Method: OECD Test Guideline 301F Remarks: Readily biodegradable.

Oxidises rapidly by photo-chemical reactions in air.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Contains constituents with the potential to

bioaccumulate.

Partition coefficient: n-

octanol/water Components: : $\log Pow: > 5,5$

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched and linear):

Bioaccumulation : Remarks: Has the potential to bioaccumulate.

Mobility in soil

Product:

Mobility : Remarks: Liquid under most environmental conditions., If it

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

mobile.

Components:

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched

and linear):

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

particles and will not be mobile.

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Other adverse effects

Product:

Additional ecological

information

: Does not have ozone depletion potential, photochemical ozone creation potential or global warming potential., Product is a mixture of non-volatile components, which will not be released to air in any significant quantities under normal conditions of use.

Films formed on water may affect oxygen transfer and damage organisms., Causes physical fouling of aquatic

organisms.

Components:

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, < 2% aromatics (Alkanes, C12-15-branched and linear) :

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.

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. Do not dispose into the environment, in drains or in water

courses.

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

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.

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. Do not pollute the soil, water or environment with the waste

container.

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14. TRANSPORT INFORMATION

International Regulations

ADR

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

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.

16. OTHER INFORMATION

Full text of H-Statements

EUH066 Repeated exposure may cause skin dryness or cracking.

H304 May be fatal if swallowed and enters airways.

Full text of other abbreviations

Asp. Tox. Aspiration hazard

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 : 1. GN 2.2.5.1313-03 "Maximum permissible

concentration of harmful substance in the working zone

area".

2. GOST 12.1.007-76 "Harmful agents. Classification and

safety requirements."

3. GOST 12.1.005-88 "General hygiene requirements to

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the working zone area".

4. GN 2.1.5.1315-03 "Reservoir water maximum permissible concentration".

5. GOST 19433-88 "Dangerous goods. Classification and marking".

6. Rail transportation safety rules and dangerous goods

accidents liquidation procedure.

7. GOST 30333-2007 Chemical product safety data

sheet. General requirements. Regulation 1907/2006/EC

Further information

Training advice : Provide adequate information, instruction and training for

operators.

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

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.