

SAFETY DATA SHEET

Shell Morlina S2 BL 10

Version 1.5

Revision Date 01.07.2024

Print Date 07.07.2024

1. IDENTIFICATION OF THE HAZARDOUS CHEMICALS AND OF THE SUPPLIER

Product name : Shell Morlina S2 BL 10

Product code : 001F8471

Manufacturer or supplier's details

Supplier : Shell Malaysia Trading Sdn Bhd
(196501000279)
Menara Shell
No. 211 Jalan Tun Sambanthan
50470 Kuala Lumpur
Malaysia

Telephone : (+60) 3 2385 2888
Telefax :

Emergency telephone number : 1 800 88 3899

Contact for Safety Data Sheet : If you have any enquiries about the content of this SDS please email lubricantSDS@shell.com

Recommended use of the chemical and restrictions on use

Recommended use : Bearing & Circulating Oil

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

GHS Classification

Aspiration hazard : Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : PHYSICAL HAZARDS:
Not classified as a physical hazard under GHS criteria.
HEALTH HAZARDS:
H304 May be fatal if swallowed and enters airways.
ENVIRONMENTAL HAZARDS:
Not classified as an environmental hazard under GHS criteria.

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Precautionary statements :

Prevention:

No precautionary phrases.

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.

Hazardous components which must be listed on the label:

Contains Distillates (Fischer - Tropsch), heavy, C18-50 - branched, cyclic and linear.

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis. Used oil may contain harmful impurities. Not classified as flammable but will burn.

3. COMPOSITION AND INFORMATION OF THE INGREDIENTS OF THE HAZARDOUS CHEMICAL

Substance / Mixture : Mixture

Chemical nature : Synthetic base oil and additives.

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Distillates (Fischer - Tropsch), heavy, C18-50 – branched, cyclic and linear	848301-69-9	Asp. Tox.1; H304	70 - < 90
distillates (petroleum), hydrotreated light	64742-47-8	Asp. Tox.1; H304	0 - < 15
N-phenyl-1-naphthylamine	90-30-2	Acute Tox.4; H302 STOT RE2; H373 Aquatic Acute1; H400 Aquatic Chronic1; H410 Skin Sens.1; H317	0.1 - < 0.24
(4-nonylphenoxy)acetic acid	3115-49-9	Acute Tox.4; H302 Skin Corr.1B; H314 Aquatic Acute1; H400 Aquatic Chronic1; H410	0 - <= 0.09

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		Skin Sens.1; H317	
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For explanation of abbreviations see section 16.

4. FIRST-AID MEASURES

- | | |
|---|--|
| 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 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 | : If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever.
The onset of respiratory symptoms may be delayed for several hours after exposure.
Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance.
Ingestion may result in nausea, vomiting and/or diarrhoea. |
| 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 | : Potential for chemical pneumonitis.
Call a doctor or poison control center for guidance. |

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. |

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Specific hazards during firefighting	: Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.
Specific extinguishing methods	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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).
Hazchem Code	: NONE/TIADA

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Avoid contact with skin and eyes.
Environmental precautions	: Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	: Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.
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

Handling

General Precautions	: Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. 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.
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Advice on safe handling : Avoid prolonged or repeated contact with skin.
Avoid inhaling vapour and/or mists.
When handling product in drums, safety footwear should be worn and proper handling equipment should be used.
Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.

Avoidance of contact : Strong oxidising agents.

Storage

Other data : Keep container tightly closed and in a cool, well-ventilated place.
Use properly labeled and closable containers.

Store at ambient temperature.

Packaging material : Suitable material: For containers or container linings, use mild steel or high density polyethylene.
Unsuitable material: PVC.

Container Advice : Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m ³	MY PEL
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m ³	OSHA Z-1
Oil mist, mineral	Not Assigned	TWA (Inhalable particulate matter)	5 mg/m ³	ACGIH

Biological occupational exposure limits

Biological Limit Values (BLV) have not been established for this material.

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/>

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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 Sécurité, (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:
Adequate ventilation to control airborne concentrations.

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

General Information:

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.

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.

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 : No respiratory protection is ordinarily required under normal conditions of use.
In accordance with good industrial hygiene practices,

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precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. 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. PVC, neoprene or nitrile rubber gloves 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.

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.

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 ordinarily required beyond standard work clothes.
It is good practice to wear chemical resistant gloves.

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.

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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	: Slight hydrocarbon
Odour Threshold	: Data not available
pH	: Not applicable
Melting / freezing point	: Data not available
pour point	-36 °C / -33 °F Method: ASTM D5950
Initial boiling point and boiling range	: Data not available
Flash point	: ≥ 140 °C / ≥ 284 °F Method: ASTM D92 (COC)
Evaporation rate	: Data not available
Flammability (solid, gas)	: Not applicable
Flammability (liquids)	: Not classified as flammable but will burn.
Upper explosion limit	: Typical 10 %(V)
Lower explosion limit	: Typical 1 %(V)
Vapour pressure	: < 0.5 Pa (20 °C / 68 °F) estimated value(s)
Relative vapour density	: > 5
Relative density	: 0.810 (15.0 °C / 59.0 °F)
Density	: 810 kg/m ³ (15 °C / 59 °F) Method: ISO 12185
Solubility(ies)	
Water solubility	: negligible
Solubility in other solvents	: Data not available

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Partition coefficient: n-octanol/water : log Pow: > 6
(based on information on similar products)

Auto-ignition temperature : > 320 °C / 608 °F

Decomposition temperature : Data not available

Viscosity

Viscosity, dynamic : Data not available

Viscosity, kinematic : 9 - 10 mm²/s (40.0 °C / 104.0 °F)
Method: ASTM D445

2.7 mm²/s (100 °C / 212 °F)
Method: ASTM D445

Particle characteristics

Particle size : Data not available

Explosive properties : Classification Code: Not classified.

Oxidizing properties : Data not available

Conductivity : This material is not expected to be a static accumulator.

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 : Stable.

Possibility of hazardous reactions : Reacts with strong oxidising agents.

Conditions to avoid : Extremes of temperature and direct sunlight.

Incompatible materials : Strong oxidising agents.

Hazardous decomposition products : No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION

Basis for assessment : Information given is based on data on the components and the toxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a

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whole, rather than for individual component(s).

- Symptoms of Overexposure : If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever.
The onset of respiratory symptoms may be delayed for several hours after exposure.
Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance.
Ingestion may result in nausea, vomiting and/or diarrhoea.
- Information on likely routes of exposure : Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.

Acute toxicity

Product:

- Acute oral toxicity : LD50 rat: > 5,000 mg/kg
Remarks: Low toxicity
Based on available data, the classification criteria are not met.

Remarks: Aspiration into the lungs may cause chemical pneumonitis which can be fatal.

- Acute inhalation toxicity : Remarks: Based on available data, the classification criteria are not met.

- Acute dermal toxicity : LD50 Rabbit: > 5,000 mg/kg
Remarks: Low toxicity
Based on available data, the classification criteria are not met.

Components:

distillates (petroleum), hydrotreated light:

- Acute oral toxicity : LD50 Rat, male and female: > 5,000 mg/kg
Method: Test(s) equivalent or similar to OECD Test Guideline 401
Remarks: Based on available data, the classification criteria are not met.

- Acute inhalation toxicity : LC50 Rat, male and female: > 2 - 10 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Test(s) equivalent or similar to OECD Test Guideline 403
Remarks: LC50 greater than near-saturated vapour concentration.
Based on available data, the classification criteria are not met.

- Acute dermal toxicity : LD50 Rat, male and female: > 2,000 mg/kg
Method: Test(s) equivalent or similar to OECD Test Guideline

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402

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

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis., Based on available data, the classification criteria are not met.

Components:

distillates (petroleum), hydrotreated light:

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:

distillates (petroleum), hydrotreated light:

Species: Rabbit

Method: Test(s) equivalent or similar to OECD Test Guideline 405

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

Respiratory or skin sensitisation

Product:

Remarks: Not a skin sensitiser.

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

Components:

distillates (petroleum), hydrotreated light:

Species: Guinea pig

Method: Test(s) equivalent or similar to OECD Test Guideline 406

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

N-phenyl-1-naphthylamine:

Remarks: May cause an allergic skin reaction in sensitive individuals.

(4-nonylphenoxy)acetic acid:

Remarks: May cause an allergic skin reaction in sensitive individuals.

Germ cell mutagenicity

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Product:

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

Components:

distillates (petroleum), hydrotreated light:

Genotoxicity in vitro

: 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: Mouse
Method: 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:

distillates (petroleum), hydrotreated light:

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, Tumours produced in animals are not considered relevant to humans., Not 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, Tumours produced in animals are not considered relevant to humans., Not a carcinogen.

Carcinogenicity -
Assessment

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

Material

GHS/CLP Carcinogenicity Classification

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Highly refined mineral oil

No carcinogenicity classification.

Reproductive toxicity

Product:

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

Components:

distillates (petroleum), hydrotreated light:

: Species: Rat
Sex: male and female
Application Route: Oral

Method: Test(s) equivalent or similar to OECD Test Guideline 415.

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

Effects on foetal development

: Species: Rat, female
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 - Assessment

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

STOT - single exposure

Product:

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

Components:

distillates (petroleum), hydrotreated light:

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

STOT - repeated exposure

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Product:

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

Components:

distillates (petroleum), hydrotreated light:

Remarks: Based on available data, the classification criteria are not met., Kidney: caused kidney effects in male rats which are not considered relevant to humans

Repeated dose toxicity

Components:

distillates (petroleum), hydrotreated light:

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

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

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

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

Aspiration toxicity

Product:

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

Components:

distillates (petroleum), hydrotreated light:

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

Further information

Product:

Remarks: Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal., ALL used oil should be handled with caution and skin contact avoided as far as possible.

Remarks: Slightly irritating to respiratory system.

Components:

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distillates (petroleum), hydrotreated light:

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

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

Toxicity to crustacean (Chronic toxicity) : Remarks: Based on available data, the classification criteria are not met.

Toxicity to microorganisms (Acute toxicity) : Remarks: Based on available data, the classification criteria are not met.

Components:

distillates (petroleum), hydrotreated light :

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

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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

Toxicity to microorganisms (Acute toxicity) : Remarks: Data not available

Toxicity to fish (Chronic toxicity) : Remarks: Data not available

Toxicity to crustacean(Chronic toxicity) : Remarks: Data not available

N-phenyl-1-naphthylamine :

M-Factor (Short-term (acute) aquatic hazard) : 1

M-Factor (Long-term (chronic) aquatic hazard) : 1

(4-nonylphenoxy)acetic acid :

M-Factor (Short-term (acute) aquatic hazard) : 1

Persistence and degradability

Product:

Biodegradability : Remarks: Not readily biodegradable., Major constituents are inherently biodegradable, but contains components that may persist in the environment.

Components:

distillates (petroleum), hydrotreated light :

Biodegradability : Biodegradation: 69 %
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 components with the potential to bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: > 6Remarks: (based on information on similar products)

Components:

distillates (petroleum), hydrotreated light :

Bioaccumulation : Remarks: Has the potential to bioaccumulate.

Mobility in soil

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Product:

Mobility : Remarks: Liquid under most environmental conditions., If it enters soil, it will adsorb to soil particles and will not be mobile.
Remarks: Floats on water.

Components:

distillates (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:

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.
Poorly soluble mixture., Causes physical fouling of aquatic organisms.

Components:

distillates (petroleum), hydrotreated light :

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 INFORMATION

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.

Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment.
Waste, spills or used product is dangerous waste.
Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination.

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

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Contaminated packaging : Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Local legislation
Remarks : Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORTATION INFORMATION

National Regulations

Hazchem Code : NONE/TIADA

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.

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.

OSHA 1994 and relevant regulations.

Factories and Machinery Act 1967 and relevant regulations.

Petroleum (Safety Measures) Act 1984.

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Environmental Quality Act 1974 and regulation.

Road Transport (Construction & Use) Dangerous Goods Vehicles Rules 2015.

Motor Vehicles (Construction, Equipment and Use) (Use of Liquefied Petroleum Gas Fuel System in Motor Vehicles) Rules 1982 – P.U. (A) 392/82 under Road Transport Act, 1987.

Other international regulations

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

TSCA : All components listed.

16. OTHER INFORMATION

Full text of H-Statements

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	Acute toxicity
Aquatic Acute	Short-term (acute) aquatic hazard
Aquatic Chronic	Long-term (chronic) aquatic hazard
Asp. Tox.	Aspiration hazard
Skin Corr.	Skin corrosion
Skin Sens.	Skin sensitisation
STOT RE	Specific target organ toxicity - repeated exposure

Abbreviations and Acronyms

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

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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

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 data base, EC 1272 regulation, etc).

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.

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