Version 3.4

Revision Date 20.01.2021

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **1.1 Product identifier**

Trade name	: Shell Morlina S2 BL 5
Product code	: 001D7736
UFI	: PHR0-00T8-S00F-A497

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

Use of the Substance/Mixture	:	Machine oil.
Uses advised against	:	This product must not be used in applications other than those listed in Section 1 without first seeking the advice of the supplier.

#### 1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier	:	Maagtechnic AG
		Sonnentalstrasse 8
		CH-8600 Dübendorf 1
Telephone	:	+41 44 824 91 91
Telefax	:	+41 44 821 59 09
Email Contact for Safety Data Sheet	:	lubeinfo@maagtechnic.com

1.4 Emergency telephone number

: Swiss Toxicological Information Centre, CH-8028 Zürich info@toxi.ch, emergency number (CH) 145, +41 (0) 44 251 51 51

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### Classification (REGULATION (EC) No 1272/2008)

Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters
	airways.
Skin irritation, Category 2	H315: Causes skin irritation.
Acute toxicity, Category 4, Inhalation	H332: Harmful if inhaled.
Long-term (chronic) aquatic hazard,	H411: Toxic to aquatic life with long lasting effects.
Category 2	

#### 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

SAFETY DATA SHEET

According to EC No 1907/2006 as amended as at the date of this SDS

# Shell Morlina S2 BL 5

Version 3.4	Revision Date	20.01.2021	Print Date 21.01.2021
Hazard pictograms		! 🕹	
Signal word	: Danger	• •	
Hazard statements	:	PHYSICAL HAZARDS: Not classified as a phys according to CLP criteri HEALTH HAZARDS:	
	H304	May be fatal if swallowe airways.	ed and enters
	H315	Causes skin irritation.	
	H332	Harmful if inhaled.	
		ENVIRONMENTAL HA	ZARDS:
	H411	Toxic to aquatic life with	n long lasting effects.
Precautionary statements	: Prevention:		
	P273	Avoid release to the env	vironment.
	P280	Wear protective gloves/ eye protection/ face pro	
	Response:		
	P301 + P310	IF SWALLOWED: Imme POISON CENTER/doct	
	P331	Do NOT induce vomitin	
	P302 + P352	IF ON SKIN: Wash with soap.	plenty of water and
	P332 + P313	If skin irritation occurs: attention.	Get medical advice/
	Storage:		
	P405	Store locked up.	
	Disposal:		
	P501	Dispose of contents/ co approved waste dispose	

Hazardous components which must be listed on the label: Contains Gas oils (petroleum), hydrodesulphurised.

### 2.3 Other hazards

This mixture does not contain any REACH registered substances that are assessed to be a PBT or a vPvB.

Used oil may contain harmful impurities.

Not classified as flammable but will burn.

# **SECTION 3: Composition/information on ingredients**

#### 3.2 Mixtures

Chemical nature	:	Highly refined mineral oils and additives.
		The highly refined mineral oil contains <3% (w/w) DMSO-

Version 3.4

Revision Date 20.01.2021

Print Date 21.01.2021

extract, according to IP346. Classification based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).

#### Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (% w/w)
Gas oils (petroleum), hydrodesulfurized	64742-79-6 265-182-8 01-2119471311-49	Asp. Tox.1; H304 Acute Tox.4; H332 Skin Irrit.2; H315 Aquatic Chronic2; H411	50 - 60
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6 265-156-6 01-2119480375-34	Asp. Tox.1; H304	40 - 50
Butylated hydroxytoluene	128-37-0 204-881-4 01-2119565113-46	Aquatic Chronic1; H410 Aquatic Acute1; H400	0,25 - 0,5
Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]	68937-41-7 273-066-3 01-2119535109-41	Repr.2; H361 STOT RE2; H373 Aquatic Chronic1; H410	0,1 - 0,9

For explanation of abbreviations see section 16.

### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

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.	÷
If inhaled	: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.	
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	<ul> <li>Flush eye with copious quantities of water. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>If persistent irritation occurs, obtain medical attention.</li> </ul>	

ersion 3.4	Revision Date 20.01.2021	Print Date 21.01.202
If swallowed	: Call emergency number for your loc If swallowed, do not induce vomiting medical facility for additional treatme spontaneously, keep head below hip If any of the following delayed signs within the next 6 hours, transport to facility: fever greater than 101° F (38 breath, chest congestion or continue oms and effects, both acute and delayed	y: transport to nearest ent. If vomiting occurs os to prevent aspiration. and symptoms appear the nearest medical 3.3°C), shortness of
Symptoms	<ul> <li>Skin irritation signs and symptoms n sensation, redness, swelling, and/or Oil acne/folliculitis signs and sympto of black pustules and spots on the s Ingestion may result in nausea, vom If material enters lungs, signs and sy coughing, choking, wheezing, difficu congestion, shortness of breath, and The onset of respiratory symptoms n several hours after exposure. Defatting dermatitis signs and symp burning sensation and/or a dried/cra</li> </ul>	blisters. bms may include formation kin of exposed areas. hiting and/or diarrhoea. ymptoms may include http://www.include dom fever. may be delayed for toms may include a

#### 4.3 Indication of any immediate medical attention and special treatment needed

Treatment

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

### **SECTION 5: Firefighting measures**

### 5.1 Extinguishing media

Suitable extinguishing media Unsuitable extinguishing media 5.2 Special hazards arising from	<ul> <li>Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.</li> <li>Do not use water in a jet.</li> </ul> the substance or mixture
Specific hazards during firefighting <b>5.3 Advice for firefighters</b>	: 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.
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).

Version 3.4	Revision Date 20.01.2021	Print Date 21.01.2021
Specific extinguishing methods	: Use extinguishing measures that an circumstances and the surrounding	

### **SECTION 6: Accidental release measures**

#### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	: 6.1.1 For non emergency personnel:
	Avoid contact with skin and eyes.
	6.1.2 For emergency responders:
	Avoid contact with skin and eyes.

#### 6.2 Environmental precautions

Environmental precautions	: Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains,
	ditches or rivers by using sand, earth, or other appropriate barriers.

#### 6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	<ul> <li>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 property.</li> </ul>
	suitable material and dispose of properly.

#### 6.4 Reference to other sections

For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet., For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.

#### **SECTION 7: Handling and storage**

General Precautions	<ul> <li>Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols.</li> <li>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.</li> </ul>

#### 7.1 Precautions for safe handling

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.

Shell Morlina S2 BL			
Version 3.4	Revisio	n Date 20.01.2021	Print Date 21.01.2021
		dispose of any contaminat s in order to prevent fires.	ted rags or cleaning
Product Transfer		rounding and bonding prod Il bulk transfer operations to	cedures should be used o avoid static accumulation.
7.2 Conditions for safe storage	e, including an	y incompatibilities	
Other data	place. U	ntainer tightly closed and ir se properly labeled and clo a diked (bunded) area.	-
	Store at	ambient temperature.	
		section 15 for any addition the packaging and storage	
Packaging material	steel or l	material: For containers or high density polyethylene. ble material: PVC.	r container linings, use mild
Container Advice		rlene containers should not tures because of possible i	
7.3 Specific end use(s)			
Specific use(s)	: Not appl	icable.	

# **SECTION 8: Exposure controls/personal protection**

# 8.1 Control parameters

### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Further information	National Institute for Occupational Safety and Health, Deutsche Forschungsgemeinschaft, For pure mineral oil spray with a boiling point of > 350°C without any additives, a guidance value of 0.2 mg/m3, measured according to the NIOSH-method, could be taken.			
Oil mist, mineral		TWA	5 mg/m3	US. ACGIH Threshold Limit Values
Butylated hydroxytoluene	128-37-0	TWA (inhalable dust)	10 mg/m3	CH SUVA
Further information				
Butylated	128-37-0	STEL (inhalable	40 mg/m3	CH SUVA

# Shell Morlina S2 BL 5

Version 3.4

Revision Date 20.01.2021

Print Date 21.01.2021

hydroxytoluene Further	dust)     Carcinogenic Category 2, Harm to the unborn child is not to be expected			
information	when the OE	when the OEL-value is respected		
Further information	National Institute for Occupational Safety and Health, Deutsche Forschungsgemeinschaft, For pure mineral oil spray with a boiling point of > 350°C without any additives, a guidance value of 0.2 mg/m3, measured according to the NIOSH-method, could be taken.			
Oil mist, mineral		TWA	5 mg/m3	US. ACGIH Threshold Limit Values

#### **Biological occupational exposure limits**

No biological limit allocated.

#### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006: Data not available

### **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

#### 8.2 Exposure controls

**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.

# Shell Morlina S2 BL 5

### Version 3.4

#### Revision Date 20.01.2021

**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.

#### Personal protective equipment

The provided information is made in consideration of the PPE directive (Council Directive 89/686/EEC) and the CEN European Committee for Standardisation (CEN) standards.

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

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	Eye protection	:	If material is handled such that it could be splashed into eyes, protective eyewear is recommended. Approved to EU Standard EN166.
gloves approved to relevant standards (e.g. Europe: EN374,	Hand protection		
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	Remarks	:	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

SAFETY DATA SHEET

According to EC No 1907/2006 as amended as at the date of this SDS

Shell Morlina S2 BL 5		
Version 3.4	Revision Date 20.01.2021	Print Date 21.01.2021
Skin and body protection	: Wear chemical resistant gloves/gauntlets and boots. Where risk of splashing, also wear an apron.	
Respiratory protection	: No respiratory protection is ordinarily conditions of use. In accordance with good industrial h precautions should be taken to avoid If engineering controls do not mainta concentrations to a level which is ad health, select respiratory protection specific conditions of use and meetin Check with respiratory protective eq Where air-filtering respirators are su appropriate combination of mask an Select a filter suitable for combined and vapours [Type A/Type P boiling meeting EN14387 and EN143.	ygiene practices, d breathing of material. ain airborne lequate to protect worker equipment suitable for the ng relevant legislation. uipment suppliers. itable, select an d filter. particulate/organic gases
Thermal hazards	: Not applicable	

#### **Environmental exposure controls**

General advice	<ul> <li>Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Section 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.</li> </ul>
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### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

Appearance	: Liquid at room temperature.
Colour	: Clear light brown
Odour	: Slight hydrocarbon
Odour Threshold	: Data not available
рН	: Not applicable
pour point	: -30 °CMethod: ISO 3016

# SAFETY DATA SHEET

According to EC No 1907/2006 as amended as at the date of this SDS Shell Morlina S2 BL 5

Version 3.4	Revision Date 20.01.2021	Print Date 21.01.2021
Initial boiling point and boiling range	: > 280 °Cestimated value(s)	
Flash point	: Typical 120 °C Method: ASTM D93 (PMCC)	
Evaporation rate	: Data not available	
Flammability (solid, gas)	: Data not available	
Upper explosion limit	: Typical 10 %(V)	
Lower explosion limit	: Typical 1 %(V)	
Vapour pressure	: < 0,5 Pa (20 °C) estimated value(s)	
Relative vapour density	: > 1estimated value(s)	
Relative density	: 0,869 (15 °C)	
Density	: 869 kg/m3 (15,0 °C) Method: ISO 12185	
Solubility(ies)		
Water solubility	: negligible	
Solubility in other solvents	: Data not available	
Partition coefficient: n- octanol/water	: log Pow: > 6(based on informatio	n on similar products)
	log Pow: > 6(based on informatio	n on similar products)
Auto-ignition temperature	: > 320 °C	
Decomposition temperature	: Data not available	
Viscosity		
Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: 5 mm2/s (40,0 °C) Method: ASTM D445	
Explosive properties	: Not classified	
Oxidizing properties	: Data not available	

### 9.2 Other information

# Shell Morlina S2 BL 5

Version 3.4	Revision Date 20.01.2021	Print Date 21.01.2021
Conductivity	: This material is not expected to be a	a static accumulator.

### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.

#### **10.2 Chemical stability**

Stable.

No hazardous reaction is expected when handled and stored according to provisions

#### 10.3 Possibility of hazardous reactions

Hazardous reactions	: Reacts with strong oxidising agents.			
10.4 Conditions to avoid				
Conditions to avoid	: Extremes of temperature and direct sunlight.			
10.5 Incompatible materials				
Materials to avoid	: Strong oxidising agents.			
10.6 Hazardous decomposition products				
Hazardous decomposition products	: No decomposition if stored and applied as directed.			

# **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

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 whole, rather than for individual component(s).
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

Shell Morlina S2 BL 5		
Version 3.4	Revision Date 20.01.2021	Print Date 21.01.2021
	pneumonitis which can be fatal.	
Acute inhalation toxicity	: Remarks: Based on available data, a are not met.	the classification criteria
Acute dermal toxicity	: LD50 Rabbit: > 5.000 mg/kg Remarks: Low toxicity: Based on available data, the classifi	cation criteria are not met.

#### Skin corrosion/irritation

#### Product:

Remarks: Causes skin irritation.

#### Serious eye damage/eye irritation

#### Product:

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

#### Respiratory or skin sensitisation

#### Product:

Remarks: For respiratory and skin sensitisation:, Not a sensitiser., Based on available data, the classification criteria are not met.

#### Germ cell mutagenicity

#### Product:

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

#### Carcinogenicity

#### Product:

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

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Version 3.4

Revision Date 20.01.2021

Print Date 21.01.2021

Material	GHS/CLP Carcinogenicity Classification
Material	GHS/CLP Carcinogenicity Classification
Gas oils (petroleum), hydrodesulfurized	No carcinogenicity classification.
Butylated hydroxytoluene	No carcinogenicity classification.
Highly refined mineral oil	No carcinogenicity classification.
	No carcinogenicity classification.

Material	Other Carcinogenicity Classification
Butylated hydroxytoluene	IARC: Group 3: Not classifiable as to its carcinogenicity to humans

#### **Reproductive toxicity**

#### Product:

Remarks: Suspected of damaging fertility., Not a developmental toxicant., Based on available data, the classification criteria are not met.

#### STOT - single exposure

#### Product:

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

#### STOT - repeated exposure

#### Product:

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

#### Aspiration toxicity

#### Product:

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

Version 3.4

Revision Date 20.01.2021

Print Date 21.01.2021

as far as possible.

Remarks: Slightly irritating to respiratory system.

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

Summary on evaluation of the Germ cell mutagenicity- Assessment	<ul> <li>CMR properties</li> <li>This product does not meet the criteria for classification in categories 1A/1B.</li> </ul>
Carcinogenicity - Assessment	: This product does not meet the criteria for classification in categories 1A/1B.
Reproductive toxicity - Assessment	: This product does not meet the criteria for classification in categories 1A/1B.

### **SECTION 12: Ecological information**

#### 12.1 Toxicity

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).(LL/EL/IL50 expressed as the nominal amount of product required to prepare aqueous test extract).
Toxicity to fish (Acute toxicity)	:	Remarks: LL/EL/IL50 > 1 <= 10 mg/l Toxic
Toxicity to crustacean (Acute toxicity)	:	Remarks: LL/EL/IL50 > 1 <= 10 mg/l Toxic
Toxicity to algae/aquatic plants (Acute toxicity)	:	Remarks: LL/EL/IL50 > 1 <= 10 mg/l Toxic
Toxicity to fish (Chronic toxicity)	:	Remarks: Data not available
Toxicity to crustacean (Chronic toxicity)	:	Remarks: Data not available
Toxicity to microorganisms (Acute toxicity)	:	Remarks: Data not available

Version 3.4

Revision Date 20.01.2021

Print Date 21.01.2021

Components:	
Butylated hydroxytoluene	:

M-Factor (Short-term (acute) : 1 aquatic hazard) M-Factor (Long-term : 1 (chronic) aquatic hazard) **Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%] :** M-Factor (Short-term (acute) : 1 aquatic hazard)

M-Factor (Long-term : 10 (chronic) aquatic hazard)

#### 12.2 Persistence and degradability

#### Product:

Biodegradability

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

is a mixture of non-volatile components, which will not be

#### 12.3 Bioaccumulative potential

Product:				
Bioaccumulation	: Remarks: Contains constituents with the potential to bioaccumulate.			
Partition coefficient: n- octanol/water	<ul> <li>log Pow: &gt; 6Remarks: (based on information on similar products)</li> <li>log Pow: &gt; 6Remarks: (based on information on similar products)</li> </ul>			
12.4 Mobility in soil				
Product:				
Mobility	<ul> <li>Remarks: Liquid under most environmental conditions., If it enters soil, it will adsorb to soil particles and will not be mobile.</li> <li>Remarks: Floats on water.</li> <li>Remarks: Floats on water.</li> </ul>			
12.5 Results of PBT and vPvB assessment				
Product:				
Assessment	: This mixture does not contain any REACH registered substances that are assessed to be a PBT or a vPvB.			
12.6 Other adverse effects				
Product:				
Additional ecological information	: Does not have ozone depletion potential, photochemical ozone creation potential or global warming potential., Product			

# SAFETY DATA SHEET

According to EC No 1907/2006 as amended as at the date of this SDS Sholl Morling S2 RI 5

Shell Morlina 52	3L 0	
Version 3.4	Revision Date 20.01.2021	Print Date 21.01.2021
	released to air in any significant qua conditions of use. Poorly soluble mixture., Causes phy organisms. Mineral oil does not cause chronic to organisms at concentrations less tha Mineral oil does not cause chronic to organisms at concentrations less tha	sical fouling of aquatic oxicity to aquatic an 1 mg/l. oxicity to aquatic

# **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

Product	<ul> <li>Recover or recycle if possible.</li> <li>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.</li> <li>Do not dispose into the environment, in drains or in water courses</li> </ul>
	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.
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	
Waste catalogue	:
	EU Waste Disposal Code (EWC):
Waste Code	:
	13 02 05*
Remarks	<ul> <li>Disposal should be in accordance with applicable regional, national, and local laws and regulations.</li> </ul>
	Classification of waste is always the responsibility of the end user.

Version 3.4

Revision Date 20.01.2021

Print Date 21.01.2021

SECTION 14: Transport information		
14.1 UN number ADN ADR RID IMDG IATA	: 3082 : 3082 : 3082 : 3082 : 3082 : 3082	
14.2 Proper shipping name		
ADN	<ul> <li>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Gas oils, (petroleum), hydrodesulphurised)</li> <li>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.</li> </ul>	
RID	<ul> <li>(Gas oils, (petroleum), hydrodesulphurised)</li> <li>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.</li> <li>(Gas oils, (petroleum), hydrodesulphurised)</li> </ul>	
IMDG	<ul> <li>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Gas oils, (petroleum), hydrodesulphurised)</li> </ul>	
ΙΑΤΑ	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Gas oils, (petroleum), hydrodesulphurised)	
14.3 Transport hazard class		
ADN ADR RID IMDG IATA	: 9 : 9 : 9 : 9 : 9 : 9	
14.4 Packing group		
ADN Packing group Classification Code Labels CDNI Inland Water Waste Agreement ADR Packing group Classification Code Hazard Identification Number Labels RID Packing group Classification Code Hazard Identification Number Labels	<ul> <li>III</li> <li>M6</li> <li>9 (N2, F)</li> <li>NST 3411 Mineral Lubricating Oils</li> <li>III</li> <li>M6</li> <li>90</li> <li>9</li> <li>III</li> <li>M6</li> <li>90</li> <li>9</li> <li>9</li> </ul>	

# Shell Morlina S2 BL 5

Version 3.4	Revision Date 20.01.2021	Print Date 21.01.2021
IMDG		
Packing group	: 111	
Labels	: 9	
ΙΑΤΑ		
Packing group	: 111	
Labels	: 9	
14.5 Environmental hazards		
ADN		
Environmentally hazardous	: yes	
ADR		
Environmentally hazardous	: yes	
RID	-	
Environmentally hazardous	: yes	
IMDG		
Marine pollutant	: yes	
14.6 Special precautions for use		
Remarks	: Special Precautions: Refer to Section 7 for special precautions which a user nee needs to comply with in connection with	eds to be aware of or

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied. MARPOL Annex 1 rules apply for bulk shipments by sea.

# **SECTION 15: Regulatory information**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture		
REACH - List of substances s (Annex XIV)	Subject to authorisation : Product is not subject to Authorisation under REACH.	
Water contaminating class (Germany)	: WGK 2 obviously hazardous to water Remarks: Classification according to AwSV	
	Remarks: Swiss Class A, (www.tankportal.ch)	
Volatile organic compounds	: 0%	
Other regulations	: The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.	
	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), annex XIV.	

# Shell Morlina S2 BL 5

Version 3.4	Revision Date 20.01.2021	Print Date 21.01.2021
	Regulation (EC) No 1907/2006 of th and of the Council of 18 December and Registration, Evaluation, Authorisati Chemicals (REACH), annex XVII. Directive 2004/37/EC on the protect risks related to exposure to carcinog and its amendments. Directive 1994/33/EC on the protect work and its amendments. Council Directive 92/85/EEC on the to encourage improvements in the s pregnant workers and workers who or are breastfeeding and its amendre	2006 concerning the on and Restriction of tion of workers from the gens or mutagens at work tion of young people at introduction of measures safety and health at work of have recently given birth

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

EINECS	:	All components listed or polymer exempt.
TSCA	:	All components listed.

### 15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

# **SECTION 16: Other information**

REGULATION (EC) No 1272/2008	Classification procedure:
Aspiration hazard, Category 1, H304	Expert judgement and weight of evidence determination.
Skin irritation, Category 2, H315	Expert judgement and weight of evidence determination.
Acute toxicity, Category 4, H332	Expert judgement and weight of evidence determination.
Long-term (chronic) aquatic hazard, Category 2, H411	Expert judgement and weight of evidence determination.

### **Full text of H-Statements**

H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	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
Aquatic Chronic	Long-term (chronic) aquatic hazard

Version 3.4 Revision Date 20.01.2021 Print Date 21.01.
Version 3.4         Revision Date 20.01.2021         Print Date 21.01.           Repr.         Reproductive toxicity         Skin Irrit.         Skin Irritation           STOT RE         Specific target organ toxicity - repeated exposure           Abbreviations and Acronyms         : 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). The standard abbreviations and acromyms used in this document can be looked up in reference literature (e.g. scientific dictionaries) and/or websites.           ACGIH = American Conference of Governmental Industrial Hygienists         ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road           AICS = Australian Inventory of Chemical Substances         ASTM = American Society for Testing and Materials           BEL = Biological exposure limits         BTEX = Benzene, Toluene, Ethylbenzene, Xylenes           CAS = Chemical Abstracts Service         CEFIC = European Chemical Industry Council           CLP = Classification Packaging and Labelling         COC < Eleveland Open-Cup

# SAFETY DATA SHEET

According to EC No 1907/2006 as amended as at the date of this SDS

sion 3.4	Revision Date 20.01.2021	Print Date 21.01.2021
	MARPOL = International Conventional Pollution From Ships NOEC/NOEL = No Observed Effet Observed Effect Level OE_HPV = Occupational Exposur PBT = Persistent, Bioaccumulative PICCS = Philippine Inventory of C Substances PNEC = Predicted No Effect Conc REACH = Registration Evaluation Chemicals RID = Regulations Relating to Inter Dangerous Goods by Rail SKIN_DES = Skin Designation STEL = Short term exposure limit TRA = Targeted Risk Assessment TSCA = US Toxic Substances Co TWA = Time-Weighted Average vPvB = very Persistent and very B	ct Concentration / No e - High Production Volume e and Toxic hemicals and Chemical centration And Authorisation Of ernational Carriage of
Further information		
Other information	: This product is classified as H304 and enters airways). The risk relat The risk arising from aspiration ha physico-chemical properties of the therefore be controlled by implement measures tailored to this specific H Section 8 of the SDS. An exposure	tes to potential for aspiration. Izard is solely related to the e substance. The risk can enting risk management nazard and included within e scenario is not presented.
	A vertical bar ( ) in the left margin from the previous version.	Indicates an amendment
Identified Uses accord Uses - Worker	ing to the Use Descriptor System	
Title	: General use of lubricants and grea machinery Industrial	ses in vehicles or
<b>Uses - Worker</b> Title	: General use of lubricants and grea	

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.

Version 3.4

Revision Date 20.01.2021

Exposure Scenario - Worker 300000010644	
SECTION 1	EXPOSURE SCENARIO TITLE
Title	General use of lubricants and greases in vehicles or machinery Industrial
Use Descriptor	Sector of Use: SU3 Process Categories: PROC 1, PROC 2, PROC 8b, PROC 9 Environmental Release Categories: ERC4, ERC7, ATIEL- ATC SPERC 4.Bi.v1
Scope of process	Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT
	MEASURES

Section 2.1	Control of Worker Exposure		
Product Characteristics			
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP		
Concentration of the	Covers use of substance/product up to 100% (unless stated		
Substance in Mixture/Article	differently).,		
Frequency and Duration of Use			
Covers daily exposures up to 8 hours (unless stated differently).			
Other Operational Conditions affecting Exposure			
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.			

Contributing Scenarios	Risk Management Measures
General measures applicable to all activities.	Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.
General exposures (closed systems)Use in closed process, no likelihood of exposure	No other specific measures identified.
Initial factory fill of equipmentUse in contained	No other specific measures identified.

Version 3.4

#### Revision Date 20.01.2021

Print Date 21.01.2021

systemsUse in closed, continuous process with occasional controlled exposureTransfer of substance or preparation into small containers (dedicated filling line, including weighing) Initial factory fill of equipment(open systems)Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated	Provide a good standard of general or controlled ventilation (5 to 15 air changes per hour). Avoid carrying out activities involving exposure for more than 4 hours
facilities	
Operation of equipment containing engine oils and similar.Use in contained systemsUse in closed process, no likelihood of exposure	No other specific measures identified.
Equipment cleaning and maintenanceTransfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities	Drain down system prior to equipment opening or maintenance. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Wear chemically resistant gloves (tested to EN374) in combination with specific activity training. Retain drain downs in sealed storage pending disposal or for subsequent recycle.
Equipment cleaning and maintenanceOperation is carried out at elevated temperature (> 20°C above ambient temperature).Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities	Drain down system prior to equipment opening or maintenance. Provide extract ventilation to emission points when contact with warm (>50oC) product is likely. Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls. Retain drain downs in sealed storage pending disposal or for subsequent recycle.
Storage.Use in closed process, no likelihood of exposureUse in closed, continuous process with occasional controlled exposure	Store substance within a closed system.

Section 2.2	Control of Environmental Exposure	
Amounts Used		
EU tonnage (tonnes per year):		2.631,1
Fraction of EU tonnage used in region:		0,1

Version 3.4

#### Revision Date 20.01.2021

Print Date 21.01.2021

Fraction of Regional tonnage used locally:	0,1
Frequency and Duration of Use	0,1
Emission Days (days/year):	300
Environmental factors not influenced by risk management	000
Local freshwater dilution factor:	10
Local marine water dilution factor:	100
Other Operational Conditions affecting Environmental Exposure	100
Negligible wastewater emissions as process operates without water	
contact.	
Release fraction to air from process (after typical onsite RMMs) :	5,00E-05
Release fraction to wastewater from process (after typical onsite	2,00E-11
RMMs and before (municipal) sewage treatment plant):	,
Release fraction to soil from process (after typical onsite RMMs):	0
Technical conditions and measures at process level (source) to pr	event release
Common practices vary across sites thus conservative process	
release estimates used.	
Technical onsite conditions and measures to reduce or limit disch	arges, air
emissions and releases to soil	-
Treat air emission to provide a typical removal efficiency of (%)	70
Prevent discharge of undissolved substance to or recover from onsite	
wastewater.	
User sites are assumed to be provided with oil/water separators or	
equivalent and for waste water to be discharged via public sewer	
system.	
Organisational measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils.	
Sludge should be incinerated, contained or reclaimed.	
	-
Conditions and Measures related to municipal sewage treatment p	
Estimated substance removal from wastewater via domestic sewage	0,1
treatment (%)	0.005.00
Assumed domestic sewage treatment plant flow (m3/d)	2,00E+03
Maximum allowable site quantity (MSafe) based on OCs and RMMs	263.432,1
as above (kg/day) : Conditions and Measures related to external treatment of waste fo	r dianaaal
External treatment and disposal of waste should comply with applicable	e local and/or regional
regulations.	
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable	local and/or regional
regulations.	ieea ana, or regionar

SECTION 3	EXPOSURE ESTIMATION	
Section 3.1 - Health		
The Risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.		
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.		

Version 3.4

Revision Date 20.01.2021

Print Date 21.01.2021

#### Section 3.2 -Environment Used ECETOC TRA model.

Used ECETOC TRA model

# SECTION 4

GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO

Section 4.1 - Health

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

#### Section 4.2 - Environment

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org).

If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a sitespecific chemical safety assessment is required.

For further information see www.ATIEL.org/REACH\_GES.

Version 3.4

Revision Date 20.01.2021

Exposure Scenario - Wo 300000010646	orker
SECTION 1	EXPOSURE SCENARIO TITLE
Title	General use of lubricants and greases in vehicles or machinery Professional
Use Descriptor	Sector of Use: SU22 Process Categories: PROC 1, PROC 2, PROC 8a, PROC 8b, PROC 20 Environmental Release Categories: ERC9a, ERC9b, ESVOC SpERC 9.6b.v1
Scope of process	Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.

SECTION 2	OPERATIONAL CONDITIONS AND RISK MANAGEMENT
	MEASURES

Section 2.1	Control of Worker Exposure		
Product Characteristics			
Physical form of product	Liquid, vapour pressure < 0.5 kPa at STP		
Concentration of the	Covers use of substance/product up to 100% (unless stated		
Substance in Mixture/Article	differently).,		
Frequency and Duration of Use			
Covers daily exposures up to 8 hours (unless stated differently).			
Other Operational Conditions affecting Exposure			
Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented.			

Contributing Scenarios	Risk Management Measures
General measures applicable to all activities.	Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.
Operation of equipment containing engine oils and similar.Use in contained systemsUse in closed process, no likelihood of	No other specific measures identified.

#### Version 3.4

Revision Date 20.01.2021

Print Date 21.01.2021

exposure	
Material transfersNon- dedicated facilityTransfer of	Avoid carrying out activities involving exposure for more than 4 hours
substance or preparation (charging/ discharging)	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
from/ to vessels/ large	
containers at non-dedicated facilities	
Equipment cleaning and maintenanceTransfer of	Drain down system prior to equipment opening or maintenance.
substance or preparation	Retain drain downs in sealed storage pending disposal or for
(charging/ discharging)	subsequent recycle.
from/ to vessels/ large containers at dedicated	
facilitiesHeat and pressure	
transfer fluids in dispersive, professional use but closed	
systems	
Storage.Use in closed	Store substance within a closed system.
process, no likelihood of exposureUse in closed,	
continuous process with	
occasional controlled	
exposure	

Section 2.2	<b>Control of Environmental Exposure</b>	
Amounts Used		
EU tonnage (tonnes per year):		5.387,2
Fraction of EU tonnage used	in region:	0,1
Fraction of Regional tonnage	used locally:	0,1
Frequency and Duration of	Use	
Emission Days (days/year):		365
Environmental factors not i	nfluenced by risk management	
Local freshwater dilution factor	or:	10
Local marine water dilution fa	ctor:	100
Other Operational Conditio	ns affecting Environmental Exposure	
Negligible wastewater emissions as process operates without water		
contact.		
Release fraction to air from p	rocess (after typical onsite RMMs) :	
Release fraction to wastewater from process (after typical onsite		5,00E-04
RMMs and before (municipal) sewage treatment plant):		
Release fraction to soil from process (after typical onsite RMMs):		1E-03
Technical conditions and m	neasures at process level (source) to p	revent release
Common practices vary acros	ss sites thus conservative process	
release estimates used.		
Technical onsite conditions	and measures to reduce or limit disc	harges, air
emissions and releases to a	soil	
Prevent discharge of undissolved substance to or recover from onsite		
wastewater.		
Organisational measures to prevent/limit release from site		
Do not apply industrial sludge to natural soils.		
Sludge should be incinerated, contained or reclaimed.		

#### Version 3.4

E

Revision Date 20.01.2021

Print Date 21.01.2021

Conditions and Measures related to municipal sewage treatment plant		
Estimated substance removal from wastewater via domestic sewage	93,8	
treatment (%)		
Assumed domestic sewage treatment plant flow (m3/d)	2,00E+03	
Maximum allowable site quantity (MSafe) based on OCs and RMMs	82,3	
as above (kg/day) :		
Conditions and Measures related to external treatment of waste for disposal		
External treatment and disposal of waste should comply with applicable local and/or regional		
regulations.		
Conditions and measures related to external recovery of waste		
External recovery and recycling of waste should comply with applicable local and/or regional		
regulations.		

SECTION 3	EXPOSURE ESTIMATION	
Section 3.1 - Health		
Scenario are the outco	t Measures/Operational Conditions that are identified in the Exposure one of a quantitative and qualitative assessment that covers this	
product. The ECETOC TRA too	ol has been used to estimate workplace exposures unless otherwise	

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

#### Section 3.2 - Environment

Used ECETOC TRA model.

# GUIDANCE TO CHECK COMPLIANCE WITH THE EXPOSURE SCENARIO

Section 4.1 - Health

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

#### Section 4.2 - Environment

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org).

If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a sitespecific chemical safety assessment is required.

For further information see www.ATIEL.org/REACH\_GES.