Version 1.4	Revision Date: 2016-12-05		DS Number: 0010017094	Print Date: 2016-12-07 Date of last issue: 10.10.2016 Date of first issue: 18.11.2014
SECTION	1. IDENTIFICATION			
Produ	ict name	:	Shell Morlina S4 I	B 150
Produ	ict code	:	001F2644	
Manu	facturer or supplier's	deta	ails	
Manu	facturer/Supplier	:	Shell Canada Pro 400 - 4th Avenue Calgary AB T2P Canada	S.W
Telep Telefa		:	(+1) 8006611600 (+1) 4033848345	
Emer	gency telephone num-	:	(US) CANUTEC (24 hr UTEC (226-8832) CANUTEC (24 hr UTEC (226-8832)): (+1) 613-996-6666; Toll Free: 1-888-CAN-
Reco	mmended use of the c	hen	nical and restriction	ons on use

Recommended use : Gear lubricant.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Hazard pictograms	: No Hazard Symbol required
Signal word	: No signal word
Hazard statements	 PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.

Version 1.4	Revision Date: 2016-12-05	SDS Number: 800010017094	Print Date: 2016-12-07 Date of last issue: 10.10.2016 Date of first issue: 18.11.2014
Preca	autionary statements	 Prevention: No precautiona Response: No precautiona Storage: No precautiona Disposal: No precautiona 	ry phrases. ry phrases.
Othe	r hazards which do no	ot result in classificat	tion

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.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance name	: Shell Morlina S4 B 150
Chemical nature	: Synthetic base oil and additives.

Hazardous components

SECTION 4. FIRST-AID MEASURES

General advice	:	Not expected to be a health hazard when used under normal 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 wa- ter 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. If persistent irritation occurs, obtain medical attention.	
If swallowed	:	In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.	
Most important symptoms and effects, both acute and delayed	:	Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. 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	:	Treat symptomatically.	
4 800010017094			

2016 2014

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon diox- ide, sand or earth may be used for small fires only.		
Unsuitable extinguishing media	:	Do not use water in a jet.		
Specific hazards during fire- fighting	:	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 meth- ods	:	Use extinguishing measures that are appropriate to local cir- cumstances 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).		

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- tive equipment and emer- gency procedures	:	Avoid contact with skin and eyes.
Environmental precautions	:	Use appropriate containment to avoid environmental contami- nation. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
		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 Chapter 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of
3 / 14		800010017094

Version 1.4	Revision Date: 2016-12-05	SDS Number: 800010017094	Print Date: 2016-12-07 Date of last issue: 10.10.2016 Date of first issue: 18.11.2014	
		this Safety D	ata Sheet.	
SECTION	N 7. HANDLING AND S	TORAGE		
Gen	eral Precautions	vapours, mis Use the infor sessment of	naust ventilation if there is risk of inhalation of ts or aerosols. mation in this data sheet as input to a risk as- local circumstances to help determine appropri- or safe handling, storage and disposal of this	
Advice on safe handling		Avoid inhalin When handlin worn and pro Properly disp	ged or repeated contact with skin. g vapour and/or mists. ng product in drums, safety footwear should be oper handling equipment should be used. ose of any contaminated rags or cleaning mate- to prevent fires.	
Avoi	dance of contact	: Strong oxidis	ing agents.	
Product Transfer		Proper groun	This material has the potential to be a static accumulator. Proper grounding and bonding procedures should be used during all bulk transfer operations.	
Stor	age			
Othe	er data	place.	er tightly closed and in a cool, well-ventilated labeled and closable containers.	
		Store at amb	ient temperature.	
Pack	kaging material		erial: For containers or container linings, use mild density polyethylene. aterial: PVC.	
Cont	tainer Advice		containers should not be exposed to high tem- cause of possible risk of distortion.	

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

	Components	CAS-No.	Value type	Control parame-	Basis		
			(Form of	ters / Permissible			
			exposure)	concentration			
Γ	Oil mist, mineral	Not Assigned	TWA ((inhal-	5 mg/m3	US. ACGIH		
		_	able frac-	-	Threshold		

Version	Revision Date:	SDS Number:
1.4	2016-12-05	800010017094

Print Date: 2016-12-07 Date of last issue: 10.10.2016 Date of first issue: 18.11.2014

	tion))	L	imit Values
	TW	A (Mist) 5 mg	g/m3 C	DSHA Z-1
		A (Inhal- 5 mg e fraction)	g/m3 A	ACGIH

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:

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,

Version 1.4	Revision Date: 2016-12-05	SDS Number:Print Date: 2016-12-07800010017094Date of last issue: 10.10.2016Date of first issue: 18.11.2014	
		drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard con- taminated clothing and footwear that cannot be cleaned. Practice good housekeeping.	
Perso	onal protective equip	ient	
	ratory protection	 No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, 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 [Type A/Type P boiling point >65°C (149°F)]. 	
	protection marks	: 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 break-through time of more than 240 minutes with preference for > 480 minutes where 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.	
Еуе р	rotection	: If material is handled such that it could be splashed into eyes, protective eyewear is recommended.	,
Skin a	and body protection	: Skin protection is not ordinarily required beyond standard work clothes.	

Version 1.4	Revision Date: 2016-12-05	SDS Number: 800010017094	Print Date: 2016-12-07 Date of last issue: 10.10.2016 Date of first issue: 18.11.2014				
		It is good pract	ice to wear chemical resistant gloves.				
Therr	mal hazards	: Not applicable	: Not applicable				
Prote	ective measures		: Personal protective equipment (PPE) should meet recom- mended national standards. Check with PPE suppliers.				
Envii	ronmental exposure	controls					
Gene	eral advice	vant environme of the environm necessary, pre charged to was municipal or in discharge to su Local guideline	te measures to fulfill the requirements of rele- ental protection legislation. Avoid contamination nent by following advice given in Chapter 6. If vent undissolved material from being dis- te water. Waste water should be treated in a dustrial waste water treatment plant before urface water. s on emission limits for volatile substances ved for the discharge of exhaust air containing				
SECTION							

Appearance	: Liquid at room temperature.
Colour	: amber
Odour	: Slight hydrocarbon
Odour Threshold	: Data not available
рН	: Not applicable
pour point	: -42 °C / -44 °F Method: ASTM D97
Initial boiling point and boiling range	: > 280 °C / 536 °F estimated value(s)
Flash point	: 275 °C / 527 °F
	Method: ASTM D92 (COC)
Evaporation rate	: Data not available
Flammability (solid, gas)	: Data not available
Upper explosion limit	: Typical 10 %(V)
Lower explosion limit	: Typical 1 %(V)
11	0001001

Versior 1.4	n Revision Date: 2016-12-05	SDS Number 80001001709			
Va	Vapour pressure		(20 °C / 68 °F) I value(s)		
Re	elative vapour density	: > 1 estimated value(s)			
Re	elative density	: 0.800 - 1	000 (15 °C / 59 °F)		
De	ensity	: 800 - 1,0	00 kg/m3Method: Unspecified		
	lubility(ies) Water solubility	: negligible			
	Solubility in other solvents	: Data not	available		
Partition coefficient: n- octanol/water		: Pow: > 6 (based or	n information on similar products)		
Αι	to-ignition temperature	: > 320 °C	/ 608 °F		
	Viscosity Viscosity, dynamic Viscosity, kinematic		available mm2/s (40.0 °C / 104.0 °F)		
_			ASTM D445		
Ex	plosive properties	: Not class	fied		
0>	kidizing properties	: Data not	available		
Co	onductivity	: This mate	erial is not expected to be a static accumulator.		
Decomposition temperature		: Data not	available		

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.
Chemical stability	: Stable.
Possibility of hazardous reac- tions	: Reacts with strong oxidising agents.
Conditions to avoid	: Extremes of temperature and direct sunlight.
Incompatible materials	: Strong oxidising agents.
Hazardous decomposition	: Hazardous decomposition products are not expected to form
/ 1/	800010017094

Version 1.4	Revision Date: 2016-12-05	SDS Number: 80001001709					
pro	products		during normal storage.				
SECTIO	ON 11. TOXICOLOGICAL	INFORMATION	I				
Ва	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).				
Sk	ormation on likely route in and eye contact are the cidental ingestion.		of exposure although exposure may occur following				
Ac	ute toxicity						
	oduct:						
Ac	ute oral toxicity		: > 5,000 mg/kg Expected to be of low toxicity:				
Ac	ute inhalation toxicity		Not considered to be an inhalation hazard under nditions of use.				
Ac	ute dermal toxicity		obit): > 5,000 mg/kg Expected to be of low toxicity:				
Sk	in corrosion/irritation						
Re Pro	oduct: marks: Expected to be slig blonged or repeated skin o in disorders such as oil a	contact without p	roper cleaning can clog the pores of the skin result-				
Se	Serious eye damage/eye irritation						

Product:

Remarks: Expected to be slightly irritating.

Respiratory or skin sensitisation

Product:

Remarks: Not expected to be a skin sensitiser.

Germ cell mutagenicity

Product:

Genotoxicity in vivo	:	Remarks: Not considered a mutagenic hazard.
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Version	Revision Date:	SDS Number:	Print Date: 201
1.4	2016-12-05	800010017094	Date of last iss
			Data of first iss

Print Date: 2016-12-07 Date of last issue: 10.10.2016 Date of first issue: 18.11.2014

Carcinogenicity

Product:

Remarks: Not expected to be carcinogenic.

Reproductive toxicity

Product:

Effects on fertility

Remarks: Not expected to impair fertility. Not expected to be a developmental toxicant.

STOT - single exposure

Product:

Remarks: Not expected to be a hazard.

STOT - repeated exposure

Product:

Remarks: Not expected to be a hazard.

Aspiration toxicity

Product: Not considered an aspiration hazard.

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.

SECTION 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 representa-
	tive of the product as a whole, rather than for individual com-
	ponent(s).(LL/EL/IL50 expressed as the nominal amount of product required to prepare aqueous test extract).

Vers 1.4	ion	Revision Date: 2016-12-05	SDS Number: 800010017094		Print Date: 2016-12-07 Date of last issue: 10.10.2016 Date of first issue: 18.11.2014
	Ecotox	licity			
	Product: Toxicity to fish (Acute toxici- ty) Toxicity to crustacean (Acute toxicity)		:	Remarks: Expect LL/EL/IL50 > 100	ed to be practically non toxic: mg/l
			:	Remarks: Expecte LL/EL/IL50 > 100	ed to be practically non toxic: mg/l
		/ to algae/aquatic (Acute toxicity)	:	Remarks: Expecte LL/EL/IL50 > 100	ed to be practically non toxic: mg/l
	Toxicity icity)	/ to fish (Chronic tox-	:	Remarks: Data no	ot available
		v to crustacean	:	Remarks: Data no	ot available
	(Chronic toxicity) Toxicity to microorganisms (Acute toxicity)		:	Remarks: Data no	ot available
	Persist	ence and degradabil	ity		
	Produc Biodeg	<u>et:</u> radability	:	Major constituents	ed to be not readily biodegradable. s are expected to be inherently biodegrada- components that may persist in the environ-
	Bioaco	umulative potential			
	Produc	<u>::</u>			
	Bioacc	umulation	:	Remarks: Contair cumulate.	ns components with the potential to bioac-
	Partitio octanol	n coefficient: n- /water	:	Pow: > 6 Remarks: (based	on information on similar products)
	Mobilit	y in soil			
	Product Mobility		:	•	under most environmental conditions. will adsorb to soil particles and will not be on water.

Version 1.4	Revision Date: 2016-12-05	SDS Number: 800010017094	Print Date: 2016-12-07 Date of last issue: 10.10.2016 Date of first issue: 18.11.2014
• • • • •	r adverse effects		
<u>Prod</u> Addit matic	ional ecological infor-	expected to be Not expected to	xture of non-volatile components, which are not released to air in any significant quantities. b have ozone depletion potential, photochemi- ion potential or global warming potential.
		Poorly soluble r May cause phy	mixture. sical fouling of aquatic organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods Waste from residues	· Decever or recycle if peopible
waste nom 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.
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.

SECTION 14. TRANSPORT INFORMATION

National Regulations

TDG Not regulated as a dangerous good

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Version 1.4	Revision Date: 2016-12-05	SDS Number: 800010017094	Print Date: 2016-12-07 Date of last issue: 10.10.2016 Date of first issue: 18.11.2014					
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code								

Pollution category Ship type Product name Special precautions	 Not applicable Not applicable Not applicable Not applicable Not applicable 	
Special precautions for user		
Remarks	: Special Precautions: Refer to Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.	
Additional Information	: MARPOL Annex 1 rules apply for bulk shipments by sea.	

SECTION 15. REGULATORY INFORMATION

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

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

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

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

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; 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; CPR - Controlled Products Regulations; 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 -

Version	Revision Date:	SDS Number:	Print Date: 2016-12-07
1 4	2016-12-05	800010017094	Date of last issue: 10.10.2016
1.4	2010-12-03	000010017034	Date of first issue: 18.11.2014

No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS -Workplace Hazardous Materials Information System

A vertical bar (|) in the left margin indicates an amendment from the previous version. Revision Date : 2016-12-05

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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