The content and format of this SDS is in accordance with Hazardous Substances (Safety Data Sheets) Notice 2017

Shell Spirax S2 A 80W-90

Version 1.9	Revision Date 29.07.2020	Print Date 31.07.2020
SECTION 1. PRODUCT AND COMI	PANY IDENTIFICATION	
Product name	: Shell Spirax S2 A 80W-90	
Product code	: 001D8276	
Manufacturer or supplier's de Supplier Telephone Telefax	etails : TransDiesel Limited NZBN 9429036551132 533 Halswell Junction Road Christchurch 8042 New Zealand : 0800 848 267 (All Hours) :	
Emergency telephone number	: 0800 848 267 (All Hours)	
	emical and restrictions on use : Transmission oil.	

SECTION 2. HAZARDS IDENTIFICATION

NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. Not classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2017., Not classified as Dangerous Goods for transport, according to NZS 5433:2012 Transport of Dangerous Goods on Land.

Hazard classification

GHS Classification

Based on available data this substance / mixture does not meet the classification criteria.

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.
Precautionary statements	Prevention:
	No precautionary phrases.
	Response:

The content and format of this SDS is in accordance with Hazardous Substances (Safety Data Sheets) Notice 2017

Shell Spirax S2 A 80W-90

Version 1.9

Revision Date 29.07.2020 No precautionary phrases. Print Date 31.07.2020

Storage:

No precautionary phrases.

Disposal:

No precautionary phrases.

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.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
Chemical nature	:	Highly refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO- extract, according to IP346.
	:	* contains one or more of the following CAS-numbers: 64742- 53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-65-0, 68037-01-4, 72623-86-0, 72623-87-1, 8042-47-5, 848301-69- 9, 68649-12-7, 151006-60-9, 163149-28-8.

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Interchangeable low viscosity base oil (<20,5 cSt @40°C) *	Not Assigned	Asp. Tox.1; H304	0 - 90
Alkyl polysulphide **	Not Assigned	Aquatic Chronic4; H413	< 5
Alkenyl amine	112-90-3	Acute Tox.4; H302 Asp. Tox.1; H304 Skin Corr.1; H314 STOT SE3; H335 STOT RE2; H373 Aquatic Acute1; H400 Aquatic Chronic1; H410	< 0.99

** polymer exempt.

For explanation of abbreviations see section 16.

SECTION 4. FIRST-AID MEASURES

If inhaled

: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.

The content and format of this SDS is in accordance with Hazardous Substances (Safety Data Sheets) Notice 2017

Shell Spirax S2 A 80W-90

Version 1.9	Revision Date 29.07.2020	Print Date 31.07.2020
In case of skin contact	: Remove contaminated clothing. F water and follow by washing with If persistent irritation occurs, obtai	soap if available.
In case of eye contact	: Flush eye with copious quantities Remove contact lenses, if presen rinsing. If persistent irritation occurs, obtai	t and easy to do. Continue
If swallowed	: In general no treatment is necess are swallowed, however, get med	
Most important symptoms and effects, both acute and delayed	: Oil acne/folliculitis signs and symp of black pustules and spots on the Ingestion may result in nausea, ve	e skin of exposed areas.
Protection of first-aiders	: When administering first aid, ensu appropriate personal protective ec incident, injury and surroundings.	
Notes to physician	: Treat symptomatically.	

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.
Specific hazards during firefighting	:	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).

The content and format of this SDS is in accordance with Hazardous Substances (Safety Data Sheets) Notice 2017

Shell Spirax S2 A 80W-90

Version 1.9		Revision Date 29.07.2020	Print Date 31.07.2020		
SECTION 6. ACCIDENTAL RELEA	SECTION 6. ACCIDENTAL RELEASE MEASURES				
Personal precautions, protective equipment and emergency procedures		Avoid contact with skin and eyes.			
Environmental precautions	:	Use appropriate containment to av contamination. Prevent from sprea ditches or rivers by using sand, ear barriers.	ding or entering drains,		
		Local authorities should be advised cannot be contained.	d if significant spillages		
Methods and materials for containment and cleaning up	:	Slippery when spilt. Avoid acciden Prevent from spreading by making or other containment material. Reclaim liquid directly or in an abso Soak up residue with an absorbent suitable material and dispose of pre	a barrier with sand, earth orbent. such as clay, sand or other		
Additional advice	:	For guidance on selection of perso see Section 8 of this Safety Data S For guidance on disposal of spilled this Safety Data Sheet.	Sheet.		

SECTION 7. HANDLING AND STORAGE

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.
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.
Product Transfer	•	Proper grounding and bonding procedures should be used during all bulk transfer operations to avoid static accumulation.
Storage		
Other data	:	Keep container tightly closed and in a cool, well-ventilated place. Use properly labeled and closable containers.
		Store at ambient temperature.

The content and format of this SDS is in accordance with Hazardous Substances (Safety Data Sheets) Notice 2017

Shell Spirax S2 A 80W-90

Version 1.9	Revision Date 29.07.2020	Print Date 31.07.2020
Packaging material	: Suitable material: For containers or steel or high density polyethylene. Unsuitable material: PVC.	container linings, use mild
Container Advice	: Polyethylene containers should not temperatures because of possible r	

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

			-	
Components	CAS-No.	Value type (Form of	Control parameters /	Basis
		exposure)	Permissible	
			concentration	
Oil mist, mineral	Not Assigned	WES-TWA	5 mg/m3	NZ OEL
		(Mist)		
	Further informa	ation: Sampled b	by a method that does	s not collect
	vapour.			
Oil mist, mineral	Not Assigned	WES-STEL	10 mg/m3	NZ OEL
		(Mist)		
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
Oil mist, mineral	Not Assigned	TWA	5 mg/m3	ACGIH
	_	(Inhalable	-	
		particulate		
		matter)		

Components with workplace control parameters

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany http://www.dguv.de/inhalt/index.jsp

L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil

Engineering n	neasures
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: 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.

The content and format of this SDS is in accordance with Hazardous Substances (Safety Data Sheets) Notice 2017

Shell Spirax S2 A 80W-90

Version 1.9	Revision Date 29.07.2020	Print Date 31.07.2020
	Appropriate measures include:	
	Adequate ventilation to control airb	orne concentrations.
	Where material is heated, sprayed greater potential for airborne conce	
	General Information:	
	Define procedures for safe handlin controls.	g and maintenance of
	Educate and train workers in the ha measures relevant to normal activit	
	product.	
	Ensure appropriate selection, testir	
	equipment used to control exposur equipment, local exhaust ventilatio	
	Drain down system prior to equipm maintenance.	ent break-in or
	Retain drain downs in sealed stora subsequent recycle.	ge pending disposal or
	Always observe good personal hyg washing hands after handling the n	naterial and before eating,
	drinking, and/or smoking. Routinel protective equipment to remove co contaminated clothing and footwea Practice good housekeeping.	ntaminants. Discard

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, 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

The content and format of this SDS is in accordance with Hazardous Substances (Safety Data Sheets) Notice 2017

Shell Spirax S2 A 80W-90

/ersion 1.9	Revision Date 29.07.2020 Print Date 31.07.2020
	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	 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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Liquid at room temperature.
Colour	: amber
Odour Threshold	: Data not available
рН	: Not applicable
pour point	: -27 °C / -17 °FMethod: ISO 3016
Melting / freezing point	Data not available

vapour.

The content and format of this SDS is in accordance with Hazardous Substances (Safety Data Sheets) Notice 2017

Shell Spirax S2 A 80W-90

Version 1.9	Revision Date 29.07.2020 Print Date 31.07.2020
Initial boiling point and boiling range	: > 280 °C / 536 °Festimated value(s)
Flash point	: 175 °C / 347 °F Method: ISO 2592
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 / 68 °F) estimated value(s)
Relative vapour density	: > 1estimated value(s)
Relative density	: 0.904 (15 °C / 59 °F)
Density	: 904 kg/m3 (15.0 °C / 59.0 °F) 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 information on similar products)
Auto-ignition temperature	: > 320 °C / 608 °F
Decomposition temperature	: Data not available
Viscosity	
Viscosity, dynamic	: Data not available
Viscosity, kinematic	: 146 mm2/s (40.0 °C / 104.0 °F) Method: ISO 3104
	14.7 mm2/s (100 °C / 212 °F) Method: ISO 3104
Explosive properties	: Not classified
Oxidizing properties	: Data not available
Conductivity	: This material is not expected to be a static accumulator.

Shell Spirax S2 A 80W-90

Version 1.9	Revision Date 29.07.2020	Print Date 31.07.2020
SECTION 10. STABILITY AND R	FACTIVITY	
		further reactivity becards in
Reactivity	: The product does not pose any addition to those listed in the fo	-
Chemical stability	: Stable.	
Possibility of hazardous reactions	: Reacts with strong oxidising ag	jents.
Conditions to avoid	: Extremes of temperature and c	lirect sunlight.
Incompatible materials	: Strong oxidising agents.	
Hazardous decomposition	: No decomposition if stored and	applied as directed.

SECTION 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 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.
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.

Skin corrosion/irritation

Product:

products

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.

Serious eye damage/eye irritation

Product:

The content and format of this SDS is in accordance with Hazardous Substances (Safety Data Sheets) Notice 2017

Shell Spirax S2 A 80W-90

Version 1.9

Revision Date 29.07.2020

Print Date 31.07.2020

Remarks: Slightly irritating to the eye., 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.

Chronic toxicity

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).

Material	GHS/CLP Carcinogenicity Classification
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.

STOT - single exposure

Product:

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

1

STOT - repeated exposure

Product:

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

The content and format of this SDS is in accordance with Hazardous Substances (Safety Data Sheets) Notice 2017

Shell Spirax S2 A 80W-90

Version 1.9

Revision Date 29.07.2020

Print Date 31.07.2020

Aspiration toxicity

Product:

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

The content and format of this SDS is in accordance with Hazardous Substances (Safety Data Sheets) Notice 2017

Shell Spirax S2 A 80W-90

Version 1.9	Revision Date 29.07.2020 Print Date 31	.07.2020
(Acute toxicity)		
<u>Components:</u> Alkenyl amine :		
M-Factor (Short-term (acute) aquatic hazard)	: 10	
M-Factor (Long-term (chronic) aquatic hazard)	: 10	
Persistence and degradability		
Product:		
Biodegradability	: Remarks: Not readily biodegradable., Major constituen inherently biodegradable, but contains components that persist in the environment.	
Bioaccumulative potential		
Product:		
Bioaccumulation	: Remarks: Contains components with the potential to bioaccumulate.	
Partition coefficient: n- octanol/water	: log Pow: > 6Remarks: (based on information on simila products)	r
Mobility in soil		
Product:		
Mobility	 Remarks: Liquid under most environmental conditions, enters soil, it will adsorb to soil particles and will not be mobile. Remarks: Floats on water. 	
Other adverse effects		
no data available <u>Product:</u>		
Additional ecological information	 Does not have ozone depletion potential, photochemic ozone creation potential or global warming potential., F is a mixture of non-volatile components, which will not released to air in any significant quantities under norm conditions of use. Poorly soluble mixture., Causes physical fouling of aqu organisms. Mineral oil does not cause chronic toxicity to aquatic organisms at concentrations less than 1 mg/l. 	Product be al

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal

The content and format of this SDS is in accordance with Hazardous Substances (Safety Data Sheets) Notice 2017

Shell Spirax S2 A 80W-90

Version 1.9	Revision Date 29.07.2020 methods in compliance with applicable Do not dispose into the environment, in courses	
	Waste product should not be allowed to ground water, or be disposed of into the Waste, spills or used product is danger	e environment.
	Disposal methods, including disposal or in accordance with the Hazardous Subs Notice 2017 and the Act.	
Contaminated packaging :	Dispose in accordance with prevailing r to a recognized collector or contractor. the collector or contractor should be es Disposal should be in accordance with national, and local laws and regulations	The competence of tablished beforehand. applicable regional,
Local legislation Remarks :	Disposal should be in accordance with national, and local laws and regulations	

SECTION 14. TRANSPORT INFORMATION

National Regulations

Land Transport Rule: Dangerous Goods 2012 -NZS 5433 Not regulated as a dangerous good

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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.

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.

SECTION 15. REGULATORY INFORMATION

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

The content and format of this SDS is in accordance with Hazardous Substances (Safety Data Sheets) Notice 2017

Shell Spirax S2 A 80W-90

Version 1.9	Revision Date 29.07.2020		Print Date 31.07.2020
mixture			
R-phrase(s)	:	Not classified.	
S-phrase(s)	:	Not classified.	

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Workplace Exposure Standards and Biological Exposure Indices November 2017. New Zealand Standard 5433:2012 Transport of Dangerous Goods on Land.

Other international regulations

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

EINECS	:	Not established.
TSCA	:	All components listed.

SECTION 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.				
H335	May cause respiratory irritation.				
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.				
H413	May cause long lasting harmful effects to aquatic life.				
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				
Olda Oran	Obia servesian				

Skin Corr. Skin corrosion

STOT RE Specific target organ toxicity - repeated exposure

STOT SE Specific target organ toxicity - single exposure

AICS - Australian Inventory of Chemical Substances; 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

The content and format of this SDS is in accordance with Hazardous Substances (Safety Data Sheets) Notice 2017

Shell Spirax S2 A 80W-90

Version 1.9	Revision Date 29.07.2020	Print Date 31.07.2020
and Health Law (Japan); IS	SO - International Organisation for St	andardization; KECI - Korea
Existing Chemicals Inventor	y; LC50 - Lethal Concentration to 50 %	6 of a test population; LD50 -
Lethal Dose to 50% of a	test population (Median Lethal Dos	e); MARPOL - International
	on of Pollution from Ships: n.o.s No	

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 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 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 date 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.

NZ / EN