Shell Spirax S2 G 140

Version 1.6

Revision Date 03.02.2021 Print Date 20.04.2024

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

Product code	:	001D8263

Manufacturer or supplier's details

Manufacturer/Supplier	 Shell India Markets Private Limited (U23201TN2004PTC053147) Commerzone, Block-2, No.2 200 Feet Radial Road Pallikaranai CHENNAI 600100 India
Telephone	: (+91) 04446945100
Telefax	: (+91) 04443451516
Emergency telephone number	: +91 22 6516 1058
Recommended use of the ch	nemical and restrictions on use
Recommended use	: Transmission oil.

2. 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. Classification based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L).
	:	* 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-

Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	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	R53	Aquatic Chronic 4; H413	< 3
Dialkyl polysulphide	68937-96-2	Xi; R43	Skin Sens. 1B;	< 3.3

9, 68649-12-7, 151006-60-9, 163149-28-8.

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	N; R50/53	H317 Aquatic Chronic 3; H412
** nolymer exempt		

** polymer exempt.

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For explanation of abbreviations see section 16.

3. HAZARDS IDENTIFICATION

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

Label elements

Safety data sheet available on request.

Hazard pictograms Signal word	 No Hazard Symbol required No signal word
Hazard statements	 PHYSICAL HAZARDS: Not classified as a physical hazard according to CLP criteria. HEALTH HAZARDS: Not classified as a health hazard under CLP criteria. ENVIRONMENTAL HAZARDS: Not classified as environmental hazard according to CLP criteria.
Precautionary statements	 Prevention: No precautionary phrases. Response: No precautionary phrases. Storage: No precautionary phrases. Disposal: No precautionary phrases.

Other hazards

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.

4. FIRST-AID MEASURES

If inhaled	: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
In case of skin contact	: Remove contaminated clothing. Flush exposed area with

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	water and follow by washing with If persistent irritation occurs, obta	
In case of eye contact	 Flush eye with copious quantities Remove contact lenses, if preser rinsing. If persistent irritation occurs, obta 	at 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 sym of black pustules and spots on th Ingestion may result in nausea, v	e skin of exposed areas.
Protection of first-aiders	: When administering first aid, ensi appropriate personal protective e incident, injury and surroundings.	quipment according to the
Notes to physician	: Treat symptomatically.	

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).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions,	: Avoid contact with skin and eyes.
protective equipment and	

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emergency procedures 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.	
	Local authorities should be advise cannot be contained.	ed if significant spillages
Methods and materials for containment and cleaning up	: Slippery when spilt. Avoid accide Prevent from spreading by makin or other containment material. Reclaim liquid directly or in an ab Soak up residue with an absorbe suitable material and dispose of p	g a barrier with sand, earth sorbent. nt such as clay, sand or othe
Additional advice	: For guidance on selection of pers see Section 8 of this Safety Data For guidance on disposal of spille this Safety Data Sheet.	Sheet.

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

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Container Advice :	Polyethylene containers should not be temperatures because of possible risk of	

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	IN OEL
Oil mist, mineral	Not Assigned	STEL (Mist)	10 mg/m3	IN OEL
Oil mist, mineral	Not Assigned	TWA (inhalable fraction)	5 mg/m3	US. ACGIH Threshold Limit Values
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
Oil mist, mineral	Not Assigned	TWA (Inhalable particulate matter)	5 mg/m3	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.

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	General Information:	
	Define procedures for safe handlin controls.	ng and maintenance of
	Educate and train workers in the h measures relevant to normal activ product.	
	Ensure appropriate selection, test equipment used to control exposu equipment, local exhaust ventilation	ire, e.g. personal protective
	Drain down system prior to equipr maintenance.	
	Retain drain downs in sealed stora subsequent recycle.	age pending disposal or
	Always observe good personal hy washing hands after handling the drinking, and/or smoking. Routine protective equipment to remove co contaminated clothing and footwe Practice good housekeeping.	material and before eating, ely wash work clothing and ontaminants. 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 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.

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	For continuous contact we recom breakthrough time of more than 2 for > 480 minutes where suitable short-term/splash protection we r recognize that suitable gloves off may not be available and in this of time maybe acceptable so long a and replacement regimes are foll a good predictor of glove resistar dependent on the exact composi Glove thickness should be typical depending on the glove make an	240 minutes with preference gloves can be identified. For recommend the same but fering this level of protection case a lower breakthrough as appropriate maintenance lowed. Glove thickness is not nce to a chemical as it is tion of the glove material. Illy greater than 0.35 mm
Eye protection	: If material is handled such that it protective eyewear is recommend	
Skin and body protection	: Skin protection is not ordinarily re work clothes. It is good practice to wear chemic	
Thermal hazards	: Not applicable	
Environmental exposure c	ontrols	
General advice	: Take appropriate measures to fur relevant environmental protection contamination of the environmen Section 6. If necessary, prevent being discharged to waste water, treated in a municipal or industria before discharge to surface wate Local guidelines on emission limit must be observed for the dischar vapour.	n legislation. Avoid It by following advice given in undissolved material from Waste water should be al waste water treatment plant IT. its for volatile substances

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid at room temperature.
Colour	:	amber
Odour	:	Data not available
Odour Threshold	:	Data not available
рН	:	Not applicable
pour point	:	-9 °C / 16 °FMethod: ISO 3016
Melting / freezing point Initial boiling point and boiling	:	Data not available > 280 °C / 536 °Festimated value(s)
range		
Flash point	:	199 °C / 390 °F Method: ISO 2592

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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	: 0.918 (15 °C / 59 °F)	
Density	: 918 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 on similar products)
Auto-ignition temperature	: > 320 °C / 608 °F	
Decomposition temperature	: Data not available	
Viscosity		
Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: 340 mm2/s (40.0 °C / 104.0 °F) Method: ISO 3104	
	25.1 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 b	e a static accumulator.

10. STABILITY AND REACTIVITY

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

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Chemical stability	: Stable.	
Possibility of hazardous	: Reacts with strong oxidising agents	5.
reactions Conditions to avoid	: Extremes of temperature and direc	t sunlight.
Incompatible materials	: Strong oxidising agents.	
Hazardous decomposition products	: No decomposition if stored and app	blied as directed.

11. TOXICOLOGICAL INFORMATION

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

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:

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

Respiratory or skin sensitisation

Product:

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Remarks: Not a skin sensitiser.

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

Components:

Dialkyl polysulphide:

Remarks: Experimental data has shown that the concentration of potentially sensitising components present in this product does not induce skin sensitisation. May cause an allergic skin reaction in sensitive individuals.

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.

STOT - repeated exposure

Product:

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

Aspiration toxicity

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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.

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

Persistence and degradability

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: Remarks: Not readily biodegradate inherently biodegradable, but cont persist in the environment., Persis International Oil Pollution Comper definition: "A non-persistent oil is of shipment, consists of hydrocarbor of which, by volume, distills at a te and (b) at least 95% of which, by temperature of 370°C (700°F) whe Method D-86/78 or any subseque	tains components that may stent per IMO criteria., hsation (IOPC) Fund bil, which, at the time of n fractions, (a) at least 50% emperature of 340°C (645°F) volume, distils at a en tested by the ASTM
: Remarks: Contains components v bioaccumulate.	vith the potential to
: log Pow: > 6Remarks: (based on i products)	information on similar
 Remarks: Liquid under most envir enters soil, it will adsorb to soil pa mobile. Remarks: Floats on water. 	
 Does not have ozone depletion por ozone creation potential or global is a mixture of non-volatile comporeleased to air in any significant q conditions of use. Poorly soluble mixture., Causes p organisms. Mineral oil does not cause chronic organisms at concentrations less 	warming potential., Product nents, which will not be uantities under normal hysical fouling of aquatic toxicity to aquatic
	 inherently biodegradable, but compersist in the environment., Persist International Oil Pollution Comperdefinition: "A non-persistent oil is of shipment, consists of hydrocarbor of which, by volume, distills at a teand (b) at least 95% of which, by temperature of 370°C (700°F) whe Method D-86/78 or any subseque Remarks: Contains components v bioaccumulate. log Pow: > 6Remarks: (based on products) Remarks: Liquid under most envirenters soil, it will adsorb to soil pamobile. Remarks: Floats on water. Does not have ozone depletion products of non-volatile comporeleased to air in any significant q conditions of use. Poorly soluble mixture., Causes p organisms. Mineral oil does not cause chronic

Disposal methods	
Waste from residues	 Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Do not dispose into the environment, in drains or in water

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		courses Do not dispose of tank water botto drain into the ground. This will res contamination. Waste arising from a spillage or ta disposed of in accordance with pr preferably to a recognised collector competence of the collector or con established beforehand.	sult in soil and groundwater ank cleaning should be revailing regulations, or or contractor. The
		MARPOL - see International Com Pollution from Ships (MARPOL 73 technical aspects at controlling po	3/78) which provides
Contaminated packaging	:	Dispose in accordance with preva to a recognized collector or contra the collector or contractor should Disposal should be in accordance national, and local laws and regul	actor. The competence of be established beforehand. with applicable regional,
Local legislation Remarks	:	Disposal should be in accordance national, and local laws and regul	

14. TRANSPORT INFORMATION

International Regulations

ADR

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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.

15. REGULATORY INFORMATION

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

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

The Manufacture, Storage and Import of Hazardous Chemicals Rules 1989 (amended version issued 2000). The Factories Act, 1948, The Second Schedule: Permissible levels of certain chemical substances in work environment, as amended through 1987. India Central motor Vehicles (Amendment) Rules 1993.

Other international regulations

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

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

16. OTHER INFORMATION

Full text of R-Phrases			
R43 R50/53	May cause sensitisation by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.		
R53	May cause long-term adverse effects in the aquatic environment.		
Full text of H-Statemer	nts		
H304 H317 H412 H413	May be fatal if swallowed and enters airways. May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects. May cause long lasting harmful effects to aquatic life.		
Full text of other abbro	eviations		
Aquatic Chronic Asp. Tox. Skin Sens.	Long-term (chronic) aquatic hazard Aspiration hazard Skin sensitisation		
Abbreviations and Acro	nyms :	The standard abbreviations and acronyms used in this document can be looked up in reference literature (e.g. scientific dictionaries) and/or websites.	
SDS Regulation	:	Regulation 1907/2006/EC	
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 use 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	

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IUCLID date base, EC 1272 regulation, etc).

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.