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

Product name	:	Shell Gadus S3 Wirerope

Product code	:	001D8527

Manufacturer or supplier's details

Manufacturer/Supplier	:	Shell India Markets Private Limited (U23201TN2004PTC053147) 2nd Floor, Campus 4A RMZ Millenia Park 143 Dr. MGR Road, Perungudi CHENNAI 600096 India
Telephone	:	(+91) 04443450000
Telefax	:	(+91) 04443451516
Emergency telephone number	:	+91 22 6516 1058
Recommended use of the ch	nen	nical and restrictions on use
Recommended use	:	Automotive and industrial grease.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature	:	A lubricating grease containing highly-refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.

Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
Naphthenic acid	1338-24-5	Xi; R36/38-R43	Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319	0.1 - 0.9

For explanation of abbreviations see section 16.

3. HAZARDS IDENTIFICATION

Not a hazardous substance or mixture.

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Label elements Hazard pictograms Signal word	: No Hazard Symbol required : No signal word	
Hazard statements	 PHYSICAL HAZARDS: Not classified as a physical haza HEALTH HAZARDS: Not classified as a health hazard ENVIRONMENTAL HAZARDS: Not classified as environmental h criteria. 	under CLP criteria.
Precautionary statements	 Prevention: No precautionary phrases. Response: No precautionary phrases. Storage: No precautionary phrases. Disposal: No precautionary phrases. 	
Sensitising components	: Contains naphthenic acid. May produce an allergic reaction.	

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 grease may contain harmful impurities. High-pressure injection under the skin may cause serious damage including local necrosis. Not classified as flammable but will burn.

4. FIRST-AID MEASURES

General advice	Not expected to be a health hazard at ambient temperature	Э.
If inhaled	No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.	
In case of skin contact	Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention. When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, th casualty should be sent immediately to a hospital. Do not v for symptoms to develop. Obtain medical attention even in the absence of apparent wounds.	
	When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, th	е

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	casualty should be sent immed for symptoms to develop. Obtain medical attention even wounds.	liately to a hospital. Do not wait in the absence of apparent
In case of eye contact	: Flush eye with copious quantiti If persistent irritation occurs, ot	
If swallowed	: In general no treatment is nece are swallowed, however, get m	, ,
Most important symptoms and effects, both acute and delayed	: Local necrosis is evidenced by tissue damage a few hours foll Oil acne/folliculitis signs and sy of black pustules and spots on Ingestion may result in nausea	owing injection. /mptoms may include formation the skin of exposed areas.
Notes to physician	determine the extent of involve anaesthetics or hot soaks shou	id therapy, to minimise tissue all and do not reflect the damage, surgical exploration to ment may be necessary. Local uld be avoided because they ospasm and ischaemia. Prompt dement and evacuation of ormed under general

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

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	a confined space. Select fire fighte relevant Standards (e.g. Europe:	e
6. ACCIDENTAL RELEASE MEA	SURES	
Personal precautions, protective equipment and emergency procedures	: Avoid contact with skin and eyes.	

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.
Methods and materials for containment and cleaning up	: Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.
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 this Safety Data Sheet.

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.
Storage	
Other data	 Keep container tightly closed and in a cool, well-ventilated place. Use properly labeled and closable containers.
	Store at ambient temperature.
Packaging material	 Suitable material: For containers or container linings, use mild steel or high density polyethylene. Unsuitable material: PVC.
Container Advice	: Polyethylene containers should not be exposed to high
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temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/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	India. Permissible levels of certain chemical substances in work environment.
Oil mist, mineral	Not Assigned	(Mist)	10 mg/m3	India. Permissible levels of certain chemical substances in work environment.
Oil mist, mineral	Not Assigned	TWA (Mist)	5 mg/m3	OSHA Z-1
	Not Assigned	TWA (Inhalable fraction)	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/

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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.
	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 for 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.
	Due to the product's semi-solid consistency, generation of mists and dusts is unlikely to occur.

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
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		appropriate combination of mask and Select a filter suitable for the combin and vapours [Type A/Type P boiling	ation of organic gases
Hand protection			
Remarks	:	Where hand contact with the product gloves approved to relevant standard US: F739) made from the following re- suitable chemical protection. PVC, n gloves Suitability and durability of a g- usage, e.g. frequency and duration of resistance of glove material, dexterity from glove suppliers. Contaminated replaced. Personal hygiene is a key care. Gloves must only be worn on of gloves, hands should be washed and Application of a non-perfumed moist	ds (e.g. Europe: EN374, naterials may provide eoprene or nitrile rubber glove is dependent on of contact, chemical y. Always seek advice gloves should be element of effective hand clean hands. After using d dried thoroughly.
		For continuous contact we recomme breakthrough time of more than 240 for > 480 minutes where suitable glo short-term/splash protection we reco recognize that suitable gloves offerin may not be available and in this case time maybe acceptable so long as a and replacement regimes are followe a good predictor of glove resistance dependent on the exact composition Glove thickness should be typically g depending on the glove make and m	minutes with preference ves can be identified. For mmend the same, but og this level of protection e a lower breakthrough ppropriate maintenance ed. Glove thickness is not to a chemical as it is of the glove material. greater than 0.35 mm
Eye protection	:	Wear safety glasses or full face shiel occur.	ld if splashes are likely to
Skin and body protection	:	Skin protection is not ordinarily requi work clothes.	red beyond standard
Thermal hazards	:	Not applicable	
Environmental exposure con	tro	bls	
General advice	:	Take appropriate measures to fulfill t	the requirements of

relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Chapter 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

		08.20
Appearance	Semi-solid at ambient temperature.	
Colour	black	
Odour	Slight hydrocarbon	
Odour Threshold	Data not available	
рН	Not applicable	
Drop point	170 °C / 338 °FMethod: IP 396	
Initial boiling point and boiling range	Data not available	
Flash point	Method: ASTM D92	
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	0.900 (15 °C / 59 °F)	
Density	900 kg/m3 (15.0 °C / 59.0 °F) Method: Unspecified	
Solubility(ies)		
Water solubility	negligible	
Solubility in other solvents	Data not available	
Partition coefficient: n- octanol/water	Pow: > 6(based on information on similar products)	
Auto-ignition temperature	> 320 °C / 608 °F	
Viscosity		
Viscosity, dynamic	Data not available	
Viscosity, kinematic	Not applicable	
	Not applicable	
Explosive properties	Not classified	

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Conductivity	:	This material is not expected to be a	static accumulator.
Decomposition temperature	:	Data not available	
10. STABILITY AND REACTIVITY			
Reactivity	:	The product does not pose any furthe addition to those listed in the following	
Chemical stability	:	Stable.	
Possibility of hazardous reactions	:	Reacts with strong oxidising agents.	
Conditions to avoid	:	Extremes of temperature and direct s	sunlight.
Incompatible materials	:	Strong oxidising agents.	
Hazardous decomposition products	:	Hazardous decomposition products a during normal storage.	are not expected to form

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.
Acu	te toxicity		
	Product:		
	Acute oral toxicity	:	LD50 rat: > 5,000 mg/kg Remarks: Expected to be of low toxicity:
	Acute inhalation toxicity	:	Remarks: Not considered to be an inhalation hazard under normal conditions of use.
	Acute dermal toxicity	:	LD50 Rabbit: > 5,000 mg/kg Remarks: Expected to be of low toxicity:

Skin corrosion/irritation

Product:

Remarks: Expected to be slightly irritating., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

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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.

Components:

Naphthenic acid:

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

Germ cell mutagenicity

Product:

Remarks: Not considered a mutagenic hazard.

Carcinogenicity

Product:

Remarks: Not expected to be carcinogenic.

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 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:

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Remarks: Not expected to be a hazard.

Aspiration toxicity

Product:

Not considered an aspiration hazard.

Further information

Product:

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

Remarks: High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

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: Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l
Toxicity to crustacean (Acute toxicity)	: Remarks: Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l
Toxicity to algae/aquatic plants (Acute toxicity)	: Remarks: Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l
Toxicity to fish (Chronic	: Remarks: Data not available
toxicity) Toxicity to crustacean (Chronic toxicity)	: Remarks: Data not available

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Toxicity to microorganisms (Acute toxicity)	: F	Remarks: Data not available	
Persistence and degradability			
Product:			
Biodegradability	c	Remarks: Expected to be not readily bi constituents are expected to be inherer contains components that may persist	ntly biodegradable, but
Bioaccumulative potential			
Product:			
Bioaccumulation		Remarks: Contains components with the theory of the terminate of terminate o	ne potential to
Partition coefficient: n- octanol/water	: F	Pow: > 6Remarks: (based on information	on on similar products)
Mobility in soil			
Product:			
Mobility	it r	Remarks: Semi-solid under most enviro t enters soil, it will adsorb to soil particl nobile. Remarks: Floats on water.	
Other adverse effects			
no data available <u>Product:</u>			
Additional ecological information	e N F C N	Product is a mixture of non-volatile com expected to be released to air in any si Not expected to have ozone depletion p photochemical ozone creation potentia potential. Poorly soluble mixture., May cause phy organisms. Mineral oil is not expected to cause any aquatic organisms at concentrations les	gnificant quantities., potential, I or global warming vsical fouling of aquatic y chronic effects to

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 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.

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	Waste, spills or used product is dange	rous waste.
Contaminated packaging	: Dispose in accordance with prevailing to a recognized collector or contractor. the collector or contractor should be es Disposal should be in accordance with national, and local laws and regulation	The competence of stablished beforehand. applicable regional,
Local legislation Remarks	: Disposal should be in accordance with national, and local laws and regulation	

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

Pollution category Ship type Product name Special precautions Special precautions for user	 Not applicable Not applicable Not applicable Not applicable
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.

15. REGULATORY INFORMATION

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

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:

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

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16. OTHER INFORMATION

Full text of R-Phrases R36/38 Irritating to eyes and skin. R43 May cause sensitisation by skin contact. Full text of H-Statements H315 Causes skin irritation. H317 May cause an allergic skin reaction. Causes serious eye irritation. H319 Full text of other abbreviations Eye Irrit. Eye irritation Skin Irrit. Skin irritation Skin Sens. Skin sensitisation Abbreviations and Acronyms : 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** Other information : A vertical bar () in the left margin indicates an amendment from the previous version.

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.