Shell Gadus S2 V220 00

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1. PRODUCT AND COMPANY ID	ENTIFICATION			
Product name	: Shell Gadus S2 V220 00			
Product code	: 001D8449			
Manufacturer or supplier's	details			
Supplier	: The Shell Company of Thailand Ltc Klongtoey 10 Soonthornkosa Road Bangkok 10110 Thailand	3		
Telephone Telefax	: (+66) 26579888 : (+66) 26579609			
Emergency telephone number	: +66 (0) 2262-7333			
Contact for Safety Data Sheet	: If you have any enquiries about th please email lubricantSDS@shell.			
Recommended use of the c	Recommended use of the chemical and restrictions on use			
Recommended use	: Automotive and industrial grease.			

2. HAZARDS IDENTIFICATION

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: No precautionary phrases.

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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 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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

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

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Bismuth Naphthenate	85736-59-0	Skin Sens.1B; H317 Eye Irrit.2; H319	0.1 - 0.99
Naphthenic acid	1338-24-5	Skin Irrit.2; H315 Skin Sens.1; H317 Eye Irrit.2; H319	0.1 - 0.99
Zinc naphthenate	12001-85-3	Skin Sens.1B; H317 Eye Irrit.2; H319 Aquatic Chronic2; H411	0.1 - 0.99
Alkyl thiadiazole	13539-13-4	Skin Irrit.2; H315 Skin Sens.1A; H317 Acute Tox.4; H332 Aquatic Chronic4; H413	0 - < 0.09

Hazardous components

For explanation of abbreviations see section 16.

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 s If persistent irritation occurs, obtain	
		When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop. Obtain medical attention even in the absence of apparent wounds.	
In case of eye contact	:	Flush eye with copious quantities of water. Remove contact lenses, if present and easy to do. Continue rinsing. If persistent irritation occurs, obtain medical attention.	
If swallowed	:	In general no treatment is necessa are swallowed, however, get medi	
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.	
		Local necrosis is evidenced by del tissue damage a few hours following	
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.	
		High pressure injection injuries require prompt surgical intervention and possibly steroid therapy, to minimise tissue damage and loss of function. Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary. Loca anaesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischaemia. Promp surgical decompression, debridement and evacuation of foreign material should be performed under general anaesthetics, and wide exploration is essential.	
5. FIRE-FIGHTING MEASURES			
Suitable extinguishing media	:	Foam, water spray or fog. Dry che dioxide, sand or earth may be use	
Unsuitable extinguishing media	:	Do not use water in a jet.	
Specific hazards during firefighting	:	Hazardous combustion products n A complex mixture of airborne soli	

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	gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.		·
Specific extinguishing methods		ng measures that are and the surrounding er	
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 is a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).		tant suit is indicated if xpected. Self-Contained hen approaching a fire in clothing approved to

6. ACCIDENTAL RELEASE MEASURES

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 Section 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Section 13 this Safety Data Sheet. 	

7. HANDLING AND STORAGE

General Precautions	Use local exhaust ventilation if there is risk of inhala vapours, mists or aerosols. Use the information in this data sheet as input to a assessment of local circumstances to help determin appropriate controls for safe handling, storage and his material.	risk ne
Advice on safe handling	Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear s worn and proper handling equipment should be use Properly dispose of any contaminated rags or clear materials in order to prevent fires.	ed.

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

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	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

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Engineering measures	: The level of protection and types of vary depending upon potential exp controls based on a risk assessme Appropriate measures include: Adequate ventilation to control airb	oosure conditions. Select ent of local circumstances.
	Where material is heated, sprayed greater potential for airborne conc	
	General Information: Define procedures for safe handlin controls. Educate and train workers in the h measures relevant to normal activi	azards and control
	product. Ensure appropriate selection, testi equipment used to control exposu equipment, local exhaust ventilatio	re, e.g. personal protective on.
	Drain down system prior to equipn maintenance. Retain drain downs in sealed stora	
	subsequent recycle. Always observe good personal hy washing hands after handling the drinking, and/or smoking. Routine protective equipment to remove co contaminated clothing and footwea Practice good housekeeping.	material and before eating, ly wash work clothing and ontaminants. Discard
	Due to the product's semi-solid co mists and dusts is unlikely to occu	
Personal protective equip	nent	
Protective measures		
Personal protective equipme PPE suppliers.	ent (PPE) should meet recommended na	tional standards. Check with
Respiratory protection	 No respiratory protection is ordinat conditions of use. In accordance with good industrial precautions should be taken to ave If engineering controls do not main 	hygiene practices, oid breathing of material.

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

Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65°C

appropriate combination of mask and filter.

(149°F)].

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Hand protection Remarks	: Where hand contact with the proc gloves approved to relevant stand US: F739) made from the followin suitable chemical protection. PVC gloves Suitability and durability of usage, e.g. frequency and duration resistance of glove material, dext from glove suppliers. Contaminat replaced. Personal hygiene is a k care. Gloves must only be worn of gloves, hands should be washed Application of a non-perfumed model.	dards (e.g. Europe: EN374, ng materials may provide C, neoprene or nitrile rubber a glove is dependent on on of contact, chemical erity. Always seek advice ed gloves should be ey element of effective han on clean hands. After using and dried thoroughly.
	For continuous contact we recombreakthrough time of more than 2 for > 480 minutes where suitable short-term/splash protection we recognize that suitable gloves offer may not be available and in this of time maybe acceptable so long a and replacement regimes are followed dependent on the exact composite Glove thickness should be typical depending on the glove make and	40 minutes with preference gloves can be identified. For ecommend the same but ering this level of protection case a lower breakthrough s appropriate maintenance owed. Glove thickness is no ice to a chemical as it is ion of the glove material. Ily 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	controls	
General advice	: Take appropriate measures to ful relevant environmental protection contamination of the environment Section 6. If necessary, prevent being discharged to waste water. treated in a municipal or industria before discharge to surface water	legislation. Avoid by following advice given i undissolved material from Waste water should be I waste water treatment pla

Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

: Semi-solid at ambient temperature.

sion 2.7 Colour		Revision Date 12.01.2022 brown	Print Date 13.01.2
	•		
Odour	:	Slight hydrocarbon	
Odour Threshold	:	Data not available	
рН		Not applicable	
Drop point	:	>= 165 °C / >= 329 °F Method: Unspecified	
Melting / freezing point		Not applicable	
Initial boiling point and boiling range	:	Data not available	
Flash point	:	Not applicable	
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	:	1.000 (15 °C / 59 °F)	
Density	:	1,000 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	:	log Pow: > 6 (based on information on similar p	roducts)
Auto-ignition temperature	:	> 320 °C / 608 °F	
Decomposition temperature	:	Data not available	
Viscosity			
Viscosity, dynamic	:	Data not available	
Viscosity, kinematic	:	Not applicable	
Explosive properties	:	Classification Code: Not classified	
Oxidizing properties		Data not available	

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Conductivity	: This material is not expected to be 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.		
Chemical stability	: Stable.		
Possibility of hazardous reactions	: Reacts with strong oxidising agents.		
Conditions to avoid	: Extremes of temperature and direct sunlight.		
Incompatible materials	: Strong oxidising agents.		
Hazardous decomposition products	: No decomposition if stored and applied as directed.		
11. TOXICOLOGICAL INFORMAT	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			

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

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Serious eye damage/eye irritation

Product:

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

Respiratory or skin sensitisation

Product:

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

Components:

Naphthenic acid:

Remarks: 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

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Product:

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

STOT - repeated exposure

Product:

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

Aspiration toxicity

Product:

Not 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: 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:

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	Based on available data, the classification criteria are not me	
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: Based on available data, the classification criteria are not met.	
Toxicity to crustacean (Chronic toxicity)	: Remarks: Based on available data, the classification criteria are not met.	
Toxicity to microorganisms (Acute toxicity)	: Remarks: Based on available data, the classification criteria are not met.	
Persistence and degradability		
Product:		
Biodegradability	: Remarks: Not readily biodegradable., Major constituents are inherently biodegradable, but contains components that may 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 similar products)	
Mobility in soil		
Product:		
Mobility	 Remarks: Semi-solid under most environmental conditions., In it enters soil, it will adsorb to soil particles and will not be mobile. Remarks: Floats on water. 	
Other adverse effects		
no data available Product:		
Additional ecological information	 Does not have ozone depletion potential, photochemical ozone creation potential or global warming potential., Product is a mixture of non-volatile components, which will not be released to air in any significant quantities under normal conditions of use. Poorly soluble mixture., Causes physical fouling of aquatic organisms. Mineral oil does not cause chronic toxicity to aquatic organisms at concentrations less than 1 mg/l. 	

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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. 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 courses Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
	MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.
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.

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.

Version 2.7 Special precautions for user	Revision Date 12.01.2022	Print Date 13.01.2022
Remarks	: Special Precautions: Refer to Sec for special precautions which a use needs to comply with in connection	er needs to be aware of or

15. REGULATORY INFORMATION

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

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

Hazardous Substance Act. B.E. 2535

Other international regulations

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

REACH	: N	Not all components listed.
TSCA	: A	All components listed.

16. OTHER INFORMATION

Full text of H-Statements

H315	Causes skin irritation.	
H317	May cause an allergic skin reaction.	
H319	Causes serious eye irritation.	
H332	Harmful if inhaled.	
H411	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 Chronic	Long-term (chronic) aquatic hazard
Eye Irrit.	Eye irritation
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitisation

Abbreviations and Acronyms

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

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Chemical Substances in China		
International Maritime Organizat		
International Organisation for Sta		
Lethal Concentration to 50 % of a		
(Median Lethal Dose); MARPOL		
Ships; n.o.s Not Otherwise Spe		
Effect Concentration; NO(A)EL -		
Effect Loading Rate; NOM - Offic		
New Zealand Inventory of Cher		
Development; OPPTS - Office of		
Bioaccumulative and Toxic subst		
Substances; (Q)SAR - (Quantita		
No 1907/2006 of the European		
Evaluation, Authorisation and Re		
Temperature; SDS - Safety Data		
Transportation of Dangerous Goo		
Substances Control Act (United		
Recommendations on the Trans		
Bioaccumulative; WHMIS - Work	place Hazardous Materials Inform	mation System

Further information

Other information

: A vertical bar (|) in the left margin indicates an amendment from the previous version.

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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