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

Product name : Shell Gadus S2 V220AC 2

Product code 001D8456

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 chemical and restrictions on use Recommended use : Automotive and industrial grease.

# 2. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : A lubricating grease containing highly-refined mineral oils and

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, 848301-69-9, 68649-12-7, 151006-60-9, 163149-28-8, 64741-88-4,

64741-89-5.

### **Hazardous components**

Chemical name	CAS-No.	Classification	Concentration
	EC-No.	(REGULATION	(% w/w)
	Registration	(EC) No	
	number	1272/2008)	
Interchangeable low	Not Assigned	Asp. Tox. 1; H304	0 - 5
viscosity base oil			

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(<20,5 cSt @40°C) *			
Alkyl thiadiazole	13539-13-4	Skin Irrit. 2; H315 Skin Sens. 1A; H317 Acute Tox. 4; H332 Aquatic Chronic 4; H413	0 - 0.099

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 : No Hazard Symbol required

Signal word : 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 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.

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#### 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

> 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, 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

If persistent irritation occurs, obtain medical attention.

If swallowed : In general no treatment is necessary unless large quantities

are swallowed, however, get medical advice.

Most important symptoms and effects, both acute and

delayed

: Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.

Local necrosis is evidenced by delayed onset of pain and

tissue damage a few hours following injection.

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. Local anaesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischaemia. Prompt 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 chemical powder, carbon

dioxide, sand or earth may be used for small fires only.

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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, protective equipment and emergency procedures Environmental precautions : Avoid contact with skin and eyes.

: 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 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.

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> 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

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	OSHA Z-1
Oil mist, mineral	Not Assigned	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH

#### Biological occupational exposure limits

Biological Limit Values (BLV) have not been established for this material.

## **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

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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.dquv.de/inhalt/index.isp

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

#### **Engineering measures**

: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include:

Adequate ventilation to control airborne concentrations.

Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

#### General Information:

Define procedures for safe handling and maintenance of controls.

Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.

Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.

Drain down system prior to equipment break-in or maintenance.

Retain drain downs in sealed storage pending disposal or subsequent recycle.

Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, 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.

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> 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.

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.

If material is handled such that it could be splashed into eyes, Eye protection

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

vapour.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** : Semi-solid at ambient temperature.

Colour : red

Odour : Slight hydrocarbon Odour Threshold : Data not available рΗ : Not applicable : 175 °C / 347 °F Drop point

Method: IP 396

Melting / freezing point Data not available Initial boiling point and boiling : Data not available

range

Flash point : Not applicable Evaporation rate : Data not available Flammability (solid, gas) : Not applicable

Flammability (liquids) : Not classified as flammable but will burn.

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) : 1.000 (15 °C / 59 °F) Relative density

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-

: log Pow: > 6 octanol/water (based on information on similar products)

Auto-ignition temperature  $: > 320 \, ^{\circ}\text{C} / 608 \, ^{\circ}\text{F}$ 

Decomposition temperature : Data not available

Viscosity

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## SAFETY DATA SHEET

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Viscosity, dynamic : Data not available Viscosity, kinematic : Not applicable

Explosive properties : Classification Code: Not classified

Oxidizing properties : Data not available

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 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.

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#### 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:**

Remarks: Not a skin sensitiser.

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

## 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:**

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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:

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

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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., If

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.

# 13. DISPOSAL CONSIDERATIONS

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#### **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

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

## Maritime transport in bulk according to IMO instruments

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

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needs to comply with in connection with transport.

#### 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.

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 : Not established. TSCA : All components listed.

#### 16. OTHER INFORMATION

#### **Full text of H-Statements**

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

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

Asp. Tox. Aspiration hazard Skin Irrit. Skin irritation 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.

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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.