According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Supplier of this and other fine lubricants 1-800-540-5823

GWLinc.com

Version 11.4

Revision Date: 01/15/2016

Print Date: 01/16/2016

SECTION 1. IDENTIFICATION

Product name : AeroShell Grease 22

Product code : 001A0059

Manufacturer or supplier's details

Manufacturer/Supplier	: Shell Oil Products US
	PO Box 4427
	Houston TX 77210-4427
	USA
SDS Request	: (+1) 877-276-7285
Customer Service	:

Emergency telephone number

Spill Information	:	877-504-9351
Health Information	:	877-242-7400

Recommended use of the chemical and restrictions on use

Recommended use : Synthetic grease for aircraft., For further details consult the AeroShell Book on www.shell.com/aviation.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

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. Storage: No precautionary phrases. Disposal: No precautionary phrases.

Other hazards which do not result in classification

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

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Version 11.4	Revision Date: 01/15/2016	Print Date: 01/16/2016

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.

The classification of this material is based on OSHA HCS 2012 criteria.

Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

: Synthetic hydrocarbon oil grease thickened with clay, containing additives.

Hazardous components

Chemical name	Synonyms	CAS-No.	Concentration (%)
Alkaryl amine		36878-20-3	1 - 3
Aryl amine	N-[(1,1,3,3- tetramethyl- bu- tyl)phenyl]naphthale n-1-amine	51772-35-1	1 - 3

SECTION 4. FIRST-AID MEASURES

2/

General advice	:	Not expected to be a health hazard when used under normal conditions.
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 wa- ter 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. 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	:	Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas.
14		800001000321

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 11.4	Revision Date: 01/15/2016	Print Date: 01/16/2016
delayed	Ingestion may result in nausea, Local necrosis is evidenced by tissue damage a few hours follo	delayed onset of pain and
Protection of first-aiders	: When administering first aid, en appropriate personal protective incident, injury and surrounding	equipment according to the
Immediate medical attention, special treatment	: Treat symptomatically.	
	High pressure injection injuries vention an d possibly steroid the age and loss of function. Because entry wounds are sma ousness of the underlying dama determine the extent of involver anaesthetics or hot soaks shou can contribute to swelling, vaso surgical decompression, debrid eign material should be perform ics, and wide exploration is ess	erapy, to minimise tissue dam- all and do not reflect the seri- age, surgical exploration to ment may be necessary. Local ld be avoided because they spasm and ischaemia. Prompt ement and evacuation of for- ned under general anaesthet-

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon diox- ide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use water in a jet.
Specific hazards during fire- fighting	:	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 meth- ods	:	Use extinguishing measures that are appropriate to local cir- cumstances 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).

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec-	:	Avoid contact with skin and eyes.
tive equipment and emer-		
gency procedures		

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 11.4	Revision Date: 01/15/2016	Print Date: 01/16/2016
Environmental precautions	: Use appropriate containment to av nation. Prevent from spreading or rivers by using sand, earth, or othe	entering drains, ditches or
Methods and materials for containment and cleaning up	: Prevent from spreading or entering ers by using sand, earth, or other a	
Additional advice	: For guidance on selection of perso see Chapter 8 of this Safety Data 9 For guidance on disposal of spilled this Safety Data Sheet.	Sheet.

SECTION 7. HANDLING AND STORAGE

Technical measures	apours, mists of Jse the information of loc	ist ventilation if there is risk of inhalation of or aerosols. Ition in this data sheet as input to a risk as- cal circumstances to help determine appropri- safe handling, storage and disposal of this
Precautions for safe handling	Avoid inhaling v When handling vorn and prope	d or repeated contact with skin. rapour and/or mists. product in drums, safety footwear should be r handling equipment should be used. e of any contaminated rags or cleaning mate- prevent fires.
Avoidance of contact	Strong oxidising	j agents.
Storage Recommended storage tem- perature	50 - 50 °C	
Other data		
	lace.	tightly closed and in a cool, well-ventilated below beled and closable containers.
Packaging material	blace. Jse properly lat Suitable materia	beled and closable containers. al: For containers or container linings, use mild nsity polyethylene.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Biological occupational exposure limits

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 11.4

Revision Date: 01/15/2016

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.

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.

Personal protective equipment

lr ti	onditions of use. In accordance with good industrial hygiene practices, precau- ons should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentra-
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According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

rsion 11.4	Revision Date: 01/15/2016	Print Date: 01/16/2016
151011 1 1.4		
	tions to a level which is adequa select respiratory protection eq cific conditions of use and mee Check with respiratory protectiv Where air-filtering respirators a priate combination of mask and Select a filter suitable for the co and vapours [Type A/Type P b	uipment suitable for the spe- ting relevant legislation. ve equipment suppliers. re suitable, select an appro- d filter. ombination of organic gases
Hand protection		
Remarks	: Where hand contact with the pri- gloves approved to relevant sta US: F739) made from the follow suitable chemical protection. P' gloves Suitability and durability usage, e.g. frequency and dura sistance of glove material, dext glove suppliers. Contaminated Personal hygiene is a key elem Gloves must only be worn on c gloves, hands should be washe cation of a non-perfumed moist For continuous contact we reco through time of more than 240 480 minutes where suitable gloves of may not be available and in this time maybe acceptable so long and replacement regimes are for a good predictor of glove resist dependent on the exact compo Glove thickness should be typic depending on the glove make a	andards (e.g. Europe: EN374, wing materials may provide VC, neoprene or nitrile rubber of a glove is dependent on ation of contact, chemical re- certity. Always seek advice from gloves should be replaced. hent of effective hand care. lean hands. After using ed and dried thoroughly. Appli- turizer is recommended. hommend gloves with break- minutes with preference for > hoves can be identified. For e recommend the same, but offering this level of protection is case a lower breakthrough as appropriate maintenance ollowed. Glove thickness is not ance to a chemical as it is isition of the glove material. cally greater than 0.35 mm
Eye protection	: If material is handled such that protective eyewear is recomme	
Skin and body protection	 Skin protection is not ordinarily work clothes. It is good practice to wear chen 	
Protective measures	: Personal protective equipment mended national standards. Ch	(PPE) should meet recom-
Environmental exposure co	ontrols	
General advice	 Take appropriate measures to vant environmental protection I of the environment by following necessary, prevent undissolved charged to waste water. Waste municipal or industrial waste wa discharge to surface water. Local guidelines on emission lin must be observed for the disch vapour. 	egislation. Avoid contamination advice given in Chapter 6. If d material from being dis- water should be treated in a ater treatment plant before mits for volatile substances

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 11.4

Revision Date: 01/15/2016

Print Date: 01/16/2016

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Semi-solid at ambient temperature.
Colour	: amber
Odour	: Slight hydrocarbon
Odour Threshold	: Data not available
рН	: Not applicable
Drop point	: >= 260 °C / >= 500 °FMethod: Unspecified
Initial boiling point and boiling range	: Data not available
Flash point	: >= 230 °C / >= 446 °F 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	: 0.868 (15 °C / 59 °F)
Density	: 868 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

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 11.4	Revision Date: 01/15/2016	Print Date: 01/16/2016
Viscosity, kinematic	: Not applicable	
Explosive properties	: Not classified	
Oxidizing properties	: Data not available	
Conductivity	: This material is not expected to	be a static accumulator.
Decomposition temperature	: Data not available	

SECTION 10. STABILITY AND REACTIVITY

Chemical stability	: Stable.
Possibility of hazardous reac- tions	: Reacts with strong oxidising agents.
Conditions to avoid	: Extremes of temperature and direct sunlight.
Incompatible materials	: Strong oxidising agents.
Hazardous decomposition products	: Hazardous decomposition products are not expected to form during normal storage.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	:	Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

Information on likely routes of exposure

Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.

Acute toxicity

Product:		
Acute oral toxicity	:	LD50 (rat): > 5,000 mg/kg Remarks: 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.

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

sion 11.4	Revision Date: 01/15/2016	Print Date: 01/16/2016
Serious eye damage	e/eye irritation	
Product: Remarks: Expected t	o be slightly irritating.	
Respiratory or skin	sensitisation	
Product: Remarks: Not expect	ed to be a skin sensitiser.	
Germ cell mutageni	city	
Product:	: Remarks: Not considered a mut	tagenic hazard.
Carcinogenicity		
Product: Remarks: Not expect	ed to be carcinogenic.	
IARC	No component of this product pres equal to 0.1% is identified as proba human carcinogen by IARC.	
ACGIH	No component of this product pres equal to 0.1% is identified as a car gen by ACGIH.	
OSHA	No component of this product pres equal to 0.1% is identified as a car gen by OSHA.	
NTP	No component of this product pres equal to 0.1% is identified as a kno by NTP.	
Reproductive toxici	ty	
Product:		
	: Remarks: Not expected to impa a developmental toxicant.	ir fertility., Not expected to be
STOT - single expos	sure	
Product: Remarks: Not expect	ed to be a hazard.	
STOT - repeated exp	oosure	
Product:		

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 11.4

Revision Date: 01/15/2016

Print Date: 01/16/2016

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.

SECTION 12. ECOLOGICAL INFORMATION

product required to prepare aqueous test extract).	
Ecotoxicity	
Product: Toxicity to fish (Acute toxici- ty) : Remarks: Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l	
Toxicity to daphnia and other aquatic invertebrates (Acute toxicity):Remarks: Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l	
Toxicity to algae (Acute tox- icity) : Remarks: Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l	
Toxicity to fish (Chronic tox- : Remarks: Data not available icity)	
Toxicity to daphnia and other : Remarks: Data not available aquatic invertebrates (Chron- ic toxicity)	
Toxicity to bacteria (Acute : Remarks: Data not available	

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

rsion 11.4	Revision Date: 01/15/2016	Print Date: 01/16/2016
toxicity)		
Persistence and degradabi	ility	
Product:		
Biodegradability	: Remarks: Expected to be not re Major constituents are expected ble, but contains components th ment.	I to be inherently biodegrada-
Bioaccumulative potential		
Product:		
Bioaccumulation	: Remarks: Contains components cumulate.	s with the potential to bioac-
Mobility in soil		
Product:		
Mobility	: Remarks: Semi-solid under mos If it enters soil, it will adsorb to s mobile.	
	Remarks: Floats on water.	
Other adverse effects		
no data available		
Product:		
Additional ecological infor- mation	 Product is a mixture of non-vola expected to be released to air in Not expected to have ozone dep cal ozone creation potential or g 	n any significant quantities. pletion potential, photochemi-
	Poorly soluble mixture. May cause physical fouling of ac	quatic organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	 Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses
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,
11 / 14	800001000321

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 11.4	Revision Date: 01/15/2016	Print Date: 01/16/2016
	national, and local laws and reg	ulations.
Local legislation Remarks	: Disposal should be in accordance national, and local laws and reg	

SECTION 14. TRANSPORT INFORMATION

National Regulations

US Department of Transportation Classification (49 CFR Parts 171-180)

Not regulated as a dangerous good

International Regulation

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	: Not applicable : Not applicable
Product name	: Not applicable
Special precautions	: Not applicable

Special precautions for user

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.

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : No OSHA Hazards

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ., Shell classifies this material as an "oil" under the CERCLA Petroleum Exclusion, therefore releases to the environment are not reportable under CERCLA.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 11.4	Revision Date: 01/15/2016	Print Date: 01/16/2016		
SARA 302		No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.		
SARA 313	: This material does not contain a known CAS numbers that excee reporting levels established by S	d the threshold (De Minimis)		
Clean Water Act This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.				
Pennsylvania Right To Kno	w			
diphenylam	ine 122	122-39-4		
California Prop 65	California Prop 65This product does not contain any che of California to cause cancer, birth def productive harm.			
The components of this product are reported in the following inventories:				
EINECS	: All components listed or polymer	r exempt.		
TSCA	: All components listed.			
DSL	: All components listed.			

SECTION 16. OTHER INFORMATION

Further information

NFPA Rating (Health, Fire, Reac- 0, 1, 0 tivity)

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

()/ 0	 The standard abbreviations and acronyms used in this document can be looked up in reference literature (e.g. scientific dictionaries) and/or websites. 	
	ACGIH = American Conference of Governmental Industrial Hygienists	
	ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road	
	AICS = Australian Inventory of Chemical Substances ASTM = American Society for Testing and Materials	
	BEL = Biological exposure limits	
	BTEX = Benzene, Toluene, Ethylbenzene, Xylenes CAS = Chemical Abstracts Service	
	CEFIC = European Chemical Industry Council	
	CLP = Classification Packaging and Labelling	
	COC = Cleveland Open-Cup	
	DIN = Deutsches Institut fur Normung DMEL = Derived Minimal Effect Level	
	DNEL = Derived No Effect Level	
	DSL = Canada Domestic Substance List	
	EC = European Commission	

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

ersion 11.4	Revision Date: 01/15/2016	Print Date: 01/16/2016	
	EC50 = Effective Concentration	fifty	
		ECETOC = European Center on Ecotoxicology and Toxicolo	
	ECHA = European Chemicals A	gency	
	•	EINECS = The European Inventory of Existing Commercial Chemical Substances	
	EL50 = Effective Loading fifty ENCS = Japanese Existing and	New Chemical Substances	
	Inventory	New Onemical Substances	
	EWC = European Waste Code		
		GHS = Globally Harmonised System of Classification and Labelling of Chemicals IARC = International Agency for Research on Cancer IATA = International Air Transport Association IC50 = Inhibitory Concentration fifty	
	IL50 = Inhibitory Level fifty	-5	
	IMDG = International Maritime D		
	INV = Chinese Chemicals Inven IP346 = Institute of Petroleum 1		
	determination of polycyclic arom		
	KECI = Korea Existing Chemica		
	LC50 = Lethal Concentration fift		
	LD50 = Lethal Dose fifty per cen		
	LL/EL/IL = Lethal Loading/Effect	ive Loading/Inhibitory loading	
	LL50 = Lethal Loading fifty MARPOL = International Conver	ntion for the Prevention of	
	Pollution From Ships		
	NOEC/NOEL = No Observed Ef	fect Concentration / No Ob-	
	served Effect Level		
	OE_HPV = Occupational Expose		
	PBT = Persistent, Bioaccumulat PICCS = Philippine Inventory of		
	Substances		
	PNEC = Predicted No Effect Co	ncentration	
	REACH = Registration Evaluation	on And Authorisation Of	
	Chemicals RID = Regulations Relating to In	tornational Carriage of Dan	
	gerous Goods by Rail	itemational Carnage of Dan-	
	SKIN DES = Skin Designation		
		STEL = Short term exposure limit	
	TRA = Targeted Risk Assessme		
	TSCA = US Toxic Substances C		
	TWA = Time-Weighted Average vPvB = very Persistent and very		
Povision Data	· 01/15/2016		

Revision Date

: 01/15/2016

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.