Version 2.10	Revision Date 14.10.2022	Print Date 28.10.2022
SECTION 1. PRODUCT AND C	COMPANY IDENTIFICATION	
Product name	: Shell Refrigeration Oil S4 FR-V 6	8
Product code	: 001D8400	
Manufacturer or supplier		
Supplier	: Viva Energy Australia Pty Ltd (Formerly: The Shell Company of (ABN 46 004 610 459) 720 Bourke Street Docklands Victoria 3008 Australia	[:] Australia)
Telephone Telefax	: +61 (0)3 8823 4444	
	: +61 (0)3 8823 4800	
Emergency telephone number	: 1800 651 818 (Australia). ; POIS CENTRE: 13 11 26 (Australia).	ONS INFORMATION
Recommended use of the	e chemical and restrictions on use	
Recommended use	: Refrigerator oil.	

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification	
Long-term (chronic) aquatic hazard	: Category 4
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: H413 May cause long lasting harmful effects to aquatic life.
Precautionary statements	: Prevention: P273 Avoid release to the environment.
	Response: No precautionary phrases.

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Storage:

No precautionary phrases.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Alkyl benzene.

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Alkylbenzene (C14- C30)	68855-24-3	Aquatic Chronic4; H413	95 - 99

For explanation of abbreviations see section 16.

SECTION 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

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	rinsing. If persistent irritation occurs, obt	ain medical attention.
If swallowed	: In general no treatment is neces are swallowed, however, get me	
Most important symptoms and effects, both acute and delayed	: Oil acne/folliculitis signs and syn of black pustules and spots on the Ingestion may result in nausea, y	ne skin of exposed areas.
	Local necrosis is evidenced by c tissue damage a few hours follow	
Protection of first-aiders	: When administering first aid, ens appropriate personal protective e incident, injury and surroundings	equipment according to the
Notes to physician	: Treat symptomatically.	
	High pressure injection injuries r intervention and possibly steroid damage and loss of function. Because entry wounds are smal seriousness of the underlying da determine the extent of involvem anaesthetics or hot soaks should can contribute to swelling, vasos surgical decompression, debride foreign material should be perfor anaesthetics, and wide explorati	I therapy, to minimise tissue I and do not reflect the image, surgical exploration to bent may be necessary. Local d be avoided because they spasm and ischaemia. Prompt ement and evacuation of rmed under general

SECTION 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 particulate gases (smoke). Carbon monoxide may be evolved if incomplete combust occurs. Unidentified organic and inorganic compounds.	
Specific extinguishing methods	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.	

Version 2.10 Special protective equipment for firefighters	:	Revision Date 14.10.2022Print Date 28.10.2022Proper 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).
Hazchem Code	:	NONE
SECTION 6. ACCIDENTAL RELEA	AS	E 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.
		Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.
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.

SECTION 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.

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Storage		
Other data	: Keep container tightly closed and place. Use properly labeled and closable	
Packaging material	: Suitable material: For containers, steel. Unsuitable material: For container PVC, polyethylene or high density	s or container linings avoid

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany http://www.dguv.de/inhalt/index.jsp

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

Engineering measures	 The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations.
	Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
	General Information: Define procedures for safe handling and maintenance of

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	Revision Date 14.10.2022 Print Date 28.10.20 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 equip	ment	
Protective measures		
Personal protective equipm PPE suppliers.	ent (PPE) should meet recommended na	tional standards. Check with
Respiratory protection	 No respiratory protection is ordinal conditions of use. In accordance with good industrial precautions should be taken to aveing If engineering controls do not main concentrations to a level which is a 	hygiene practices, bid breathing of material. htain airborne

In engineering controls do not maintain airborne
concentrations to a level which is adequate to protect worker
health, select respiratory protection equipment suitable for the
specific conditions of use and meeting relevant legislation.
Check with respiratory protective equipment suppliers.
Where air-filtering respirators are suitable, select an
appropriate combination of mask and filter.
Select a filter suitable for the combination of organic gases
and vapours and particles [Type A/Type P boiling point >65°C
(149°F)].

Hand protection	
Remarks	: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubber gloves Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

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	for > 480 minutes where suital short-term/splash protection w recognize that suitable gloves may not be available and in th time maybe acceptable so lon	an 240 minutes with preference ble gloves can be identified. For ve recommend the same but offering this level of protection is case a lower breakthrough g as appropriate maintenance followed. Glove thickness is not stance to a chemical as it is osition of the glove material. ically greater than 0.35 mm
Eye protection	: If material is handled such tha protective eyewear is recomm	t it could be splashed into eyes, ended.
Skin and body protection	: Skin protection is not ordinaril work clothes. It is good practice to wear che	
Thermal hazards	: Not applicable	
Environmental exposure cor	ntrols	
General advice	Section 6. If necessary, preve being discharged to waste wa treated in a municipal or indus before discharge to surface wa Local guidelines on emission	tion legislation. Avoid nent by following advice given in ent undissolved material from ter. Waste water should be strial waste water treatment plant ater.
SECTION 9. PHYSICAL AND CHE	MICAL PROPERTIES	
Appearance	: Liquid at room temperature.	
Colour	: colourless	
Odour	: Slight hydrocarbon	
Odour Threshold	: Data not available	
рН	: Not applicable	
pour point	: -39 °C / -38 °F Method: Unspecified	
Melting / freezing point	Data not available	
Initial boiling point and boiling	: > 280 °C / 536 °Festimated va	ilue(s)

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range		
Flash point	: 190 °C / 374 °F Method: Unspecified	
Evaporation rate	: Data not available	
Flammability (solid, gas)	: Not applicable	
Flammability (liquids)	: Not classified as flammable but w	ill 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)	
Relative density	: 0.871 (15 °C / 59 °F)	
Density	: 871 kg/m3 (15 °C / 59 °F) Method: ISO 12185	
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 p	broducts)
Auto-ignition temperature	: > 320 °C / 608 °F	
Decomposition temperature	: Data not available	
Viscosity		
Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: 68 mm2/s (40.0 °C / 104.0 °F) Method: ISO 3104	
	6.2 mm2/s (100 °C / 212 °F) Method: ISO 3104	
Explosive properties	: Classification Code: Not classified	t

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Conductivity	: This material is not expected to be	a static accumulator.
Particle size	: Data not available	

SECTION 10. STABILITY AND REACTIVITY

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.

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).
Exposure routes	: Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.
Acute toxicity	
Product:	
Acute oral toxicity	 LD50 rat: > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the classification criteria are not met.
Acute inhalation toxicity	: Remarks: Based on available data, the classification criteria are not met.
Acute dermal toxicity	 LD50 Rabbit: > 5,000 mg/kg Remarks: Low toxicity: Based on available data, the classification criteria are not met.
Skin corrosion/irritation	

Product:

Version 2.10 Revision Date 14.10.2022 Print Date 28.10.2022 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.

Chronic toxicity

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.

Material	GHS/CLP Carcinogenicity Classification
Alkylbenzene (C14-C30)	No carcinogenicity classification.

Reproductive toxicity

Product:

Remarks: Not a developmental toxicant., Does not impair fertility., Based on available data, the classification criteria are not met.

STOT - single exposure

Product:

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

STOT - repeated exposure

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Product:

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

Aspiration toxicity

Product:

Not an aspiration hazard.

Further information

Product:

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

Remarks: 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

	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).
Eco	toxicity	
	Product:	
	Toxicity to fish (Acute : toxicity)	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
	Toxicity to crustacean (Acute : toxicity)	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
	Toxicity to algae/aquatic : plants (Acute toxicity)	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.

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Toxicity to fish (Chronic toxicity)	: Remarks: Data not available	
Toxicity to crustacean (Chronic toxicity)	: Remarks: Data not available	
Toxicity to microorganisms (Acute toxicity)	: Remarks: Data not available	
Persistence and degradability		
Product:		
Biodegradability	: Remarks: Not readily biodegrad inherently biodegradable, but c persist in the environment.	
Bioaccumulative potential		
Product:		
Bioaccumulation	: Remarks: Contains component bioaccumulate.	ts with the potential to
Partition coefficient: n- octanol/water	: log Pow: > 6Remarks: (based o products)	on information on similar
Mobility in soil		
Product:		
Mobility	 Remarks: Liquid under most er enters soil, it will adsorb to soil mobile. Remarks: Floats on water. 	
Other adverse effects		
no data available <u>Product:</u>		
Additional ecological information	 Does not have ozone depletion ozone creation potential or glob is a mixture of non-volatile com released to air in any significan conditions of use. Poorly soluble mixture., Causes organisms. 	bal warming potential., Product ponents, which will not be at quantities under normal

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	: Recover or r
	It is the resp

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.

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	Do not dispose into the environm courses	ent, in drains or in water
ground water, or be dis Waste, spills or used p Waste arising from a s disposed of in accorda preferably to a recogni competence of the coll established beforehand Do not dispose of tank		angerous waste. ank cleaning should be revailing regulations, or or contractor. The
	MARPOL - see International Com Pollution from Ships (MARPOL 73 technical aspects at controlling po	3/78) which provides
Contaminated packaging	: Dispose in accordance with preva to a recognized collector or contra the collector or contractor should Disposal should be in accordance national, and local laws and regul	actor. The competence of be established beforehand. with applicable regional,
Local legislation		
Remarks	 Disposal should be in accordance national, and local laws and regul 	

SECTION 14. TRANSPORT INFORMATION

National Regulations

ADG

Not regulated as a dangerous good

International Regulations

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.	

SECTION 15. REGULATORY INFORMATION

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

Standard for the Uniform	:	No poison schedule number allocated
Scheduling of Medicines and		
Poisons		

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

Product classified as per Work Health Safety Regulations – Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2012 and SDS prepared as per national model code of practice for preparation of safety data sheet for Hazardous chemicals 2020 based on Globally Harmonized Classification version 7.

National Model Code of Practice for the Labelling of Workplace Hazardous Chemicals (2011).

Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG code). Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Other international regulations

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

REACH :	All components listed or polymer exempt.
TSCA :	All components listed.
AIIC :	Listed introduction

SECTION 16. OTHER INFORMATION

Full text of H-Statements

H413 May cause long lasting harmful effects to aquatic life. **Full text of other abbreviations**

Aquatic Chronic Long-term (chronic) aquatic hazard

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

SAFETY DATA SHEET

Shell Refrigeration Oil S4 FR-V 68

Revision Date 14.10.2022 Version 2.10 Print Date 28.10.2022 concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC -New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature: SDS - Safety Data Sheet: TCSI - Taiwan Chemical Substance Inventory: TDG -Transportation of Dangerous Goods: TECI - Thailand Existing Chemicals Inventory: TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Date of preparation or review : 14.10.2022

Further information

Training advice	:	Provide adequate information, instruction and training for operators.
Other information	:	A vertical bar () in the left margin indicates an amendment from the previous version.
Sources of key data used to compile the Safety Data Sheet	:	The quoted data are from, but not limited to, one or more sources of information (e.g. toxicological data from Shell Health Services, material suppliers' data, CONCAWE, EU IUCLID date base, EC 1272 regulation, etc).

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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