According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.0	Revision Date: 04/12/2016	Print Date: 04/13/2016
SECTION 1. IDENTIFICATION		
Product name	: Shell Tellus S2 VX 32	
Product code	: 001F8432	
Manufacturer or supplier	's details	
Manufacturer/Supplier	 Shell Oil Products US PO Box 4427 Houston TX 77210-4427 USA 	
SDS Request Customer Service	: (+1) 877-276-7285 :	
Emergency telephone nu	Imber	
Spill Information	: 877-504-9351	
Health Information	: 877-242-7400	
Recommended use of th	e chemical and restrictions on use	
Recommended use	: Hydraulic oil	

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

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

Version 1.0	Revision Date: 04/12/2016	Print Date: 04/13/2016

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.

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	: Highly refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMS extract, according to IP346.	
	* contains one or more of the following CAS-numb 53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742 68037-01-4, 72623-86-0, 72623-87-1, 8042-47-5, 9.	2-65-0,

Hazardous components

Chemical name	Synonyms	CAS-No.	Concentration (%)
Interchangeable low vis- cosity base oil (<20,5 cSt @40°C) *		Not Assigned	0 - 90

SECTION 4. FIRST-AID MEASURES

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	: Oil acne/folliculitis signs and symptoms may include formation
2/14	800010026146

US

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.0	Revision Date: 04/12/2016	Print Date: 04/13/2016
and effects, both acute and delayed	of black pustules and spots on Ingestion may result in nausea, Local necrosis is evidenced by tissue damage a few hours follo	vomiting and/or diarrhoea. 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 Id be avoided because they ospasm and ischaemia. Prompt lement 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 1.0	Revision Date: 04/12/2016	Print Date: 04/13/2016
Environmental precautions	: Use appropriate containment to avoid nation. Prevent from spreading or en rivers by using sand, earth, or other a Local authorities should be advised i cannot be contained.	tering drains, ditches or appropriate barriers.
Methods and materials for containment and cleaning up	 Slippery when spilt. Avoid accidents Prevent from spreading by making a or other containment material. Reclaim liquid directly or in an absord Soak up residue with an absorbent s suitable material and dispose of prop 	barrier with sand, earth bent. uch as clay, sand or other
Additional advice	: For guidance on selection of persona see Chapter 8 of this Safety Data Sh For guidance on disposal of spilled n this Safety Data Sheet.	eet.

SECTION 7. HANDLING AND STORAGE

Technical measures	:	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.
Precautions for 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 mate- rials in order to prevent fires.
Avoidance of contact	:	Strong oxidising agents.
Product Transfer	:	This material has the potential to be a static accumulator. Proper grounding and bonding procedures should be used during all bulk transfer operations.
Storage		
Other data	:	Keep container tightly closed and in a cool, well-ventilated place. Use properly labeled and closable containers.
		Store at ambient temperature.

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.0	Revision Date: 04/12/2016	Print Date: 04/13/2016	
Packaging material	: Suitable material: For containers steel or high density polyethylene Unsuitable material: PVC.		
Container Advice		: Polyethylene containers should not be exposed to high tem- peratures because of possible risk of distortion.	

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Oil mist, mineral	Not Assigned	TWA ((inhal- able frac- tion))	5 mg/m3	US. ACGIH Threshold Limit Values
		(Mist)	5 mg/m3	OSHA_TRA NS

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 controls.

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

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

rsion 1.0	Revision Date: 04/12/2016	Print Date: 04/13/2016
	product. Ensure appropriate selection, test equipment used to control expose equipment, local exhaust ventilat Drain down system prior to equip nance. Retain drain downs in sealed sto subsequent recycle. Always observe good personal h washing hands after handling the drinking, and/or smoking. Routin protective equipment to remove of taminated clothing and footwear Practice good housekeeping.	sure, e.g. personal protective tion. oment break-in or mainte- arage pending disposal or avgiene measures, such as a material and before eating, nely wash work clothing and contaminants. Discard con-
Personal protective equipme	nt	
Respiratory protection	 No respiratory protection is ordin conditions of use. In accordance with good industri- tions should be taken to avoid br If engineering controls do not ma tions to a level which is adequate select respiratory protection equi cific conditions of use and meetin Check with respiratory protective Where air-filtering respirators are priate combination of mask and f Select a filter suitable for the con and vapours [Type A/Type P bo 	al hygiene practices, precau- eathing of material. aintain airborne concentra- e to protect worker health, ipment suitable for the spe- ng relevant legislation. e equipment suppliers. e suitable, select an appro- filter. nbination of organic gases
Hand protection Remarks	: Where hand contact with the pro- gloves approved to relevant stan US: F739) made from the followi suitable chemical protection. PVG gloves Suitability and durability of usage, e.g. frequency and durati- sistance of glove material, dexter glove suppliers. Contaminated gl Personal hygiene is a key eleme Gloves must only be worn on cle gloves, hands should be washed cation of a non-perfumed moistur For continuous contact we recom through time of more than 240 m 480 minutes where suitable gloves of may not be available and in this of time maybe acceptable so long a and replacement regimes are fol a good predictor of glove resistan dependent on the exact composi Glove thickness should be typica	dards (e.g. Europe: EN374, ng materials may provide C, neoprene or nitrile rubber of a glove is dependent on on of contact, chemical re- rity. Always seek advice from loves should be replaced. Int of effective hand care. an hands. After using I and dried thoroughly. Appli- rizer is recommended. Intermed gloves with break- ninutes with preference for > es can be identified. For recommend the same, but fering this level of protection case a lower breakthrough as appropriate maintenance lowed. Glove thickness is not nice to a chemical as it is ition of the glove material. ally greater than 0.35 mm

According to OSHA Hazard Communication Standard, 29 CFR

1910.1200

Version 1.0	Revision Date: 04/12/2016	Print Date: 04/13/2016
Eye protection	: If material is handled such that it protective eyewear is recommen	
Skin and body protection	: Skin protection is not ordinarily re work clothes. It is good practice to wear chemi	
Protective measures	: Personal protective equipment (F mended national standards. Che	
Environmental exposure of	controls	
General advice	 Take appropriate measures to fur vant environmental protection leg of the environment by following a necessary, prevent undissolved charged to waste water. Waste v municipal or industrial waste wate discharge to surface water. Local guidelines on emission lim must be observed for the dischar vapour. 	gislation. Avoid contamination advice given in Chapter 6. If material from being dis- vater should be treated in a ter treatment plant before its for volatile substances

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid	
Colour	: clear	
Odour	: Slight hydrocarbon	
Odour Threshold	: Data not available	
рН	: Not applicable	
pour point	: -39 °C / -38 °FMethod: ISO 3016	
Initial boiling point and boiling range	: > 280 °C / 536 °Festimated value(s))
Flash point	: 215 °C / 419 °F Method: ISO 2592	
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)	

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.0	Revision Date: 04/12/2016	Print Date: 04/13/2016
Relative density	: 0.854 (15 °C / 59 °F)	
Density	: 854 kg/m3 (15.0 °C / 59.0 °F) Method: ISO 12185	
Solubility(ies) Water solubility	: negligible	
Solubility in other solvents	: Data not available	
Partition coefficient: n- octanol/water	: Pow: > 6(based on information o	n similar products)
Auto-ignition temperature	: > 320 °C / 608 °F	
Viscosity Viscosity, dynamic	: Data not available	
Viscosity, kinematic	: 1430 mm2/s (-20 °C / -4 °F) Method: ASTM D445	
	32 mm2/s (40.0 °C / 104.0 °F) Method: ASTM D445	
	6.1 mm2/s (100 °C / 212 °F) Method: ASTM D445	
Explosive properties	: Not classified	
Oxidizing properties	: Data not available	
Conductivity	: This material is not expected to b	e a static accumulator.
Decomposition temperature	: Data not available	

SECTION 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 reac- tions	: Reacts with strong oxidising agents.	
Conditions to avoid	: Extremes of temperature and direct sunlight.	

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.0	Revision Date: 04/12/2016	Print Date: 04/13/2016
Incompatible materials	: Strong oxidising agents.	
Hazardous decomposition products	: Hazardous decomposition proc during normal storage.	lucts are not expected to form

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.

Serious eye damage/eye irritation

Product:

Remarks: Expected to be slightly irritating.

Respiratory or skin sensitisation

Product:

Remarks: Not expected to be a skin sensitiser.

Germ cell mutagenicity

Product:

: Remarks: Not considered a mutagenic hazard.

Carcinogenicity

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.0

Revision Date: 04/12/2016

Print Date: 04/13/2016

Product:

Remarks: Not expected to be carcinogenic.

Remarks: Product contains mineral oils of types shown to be non-carcinogenic in animal skinpainting studies., Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

Reproductive toxicity

Product:

Remarks: Not expected to impair fertility., Not expected to be a developmental toxicant.

STOT - single exposure

Product:

Remarks: Not expected to be a hazard.

STOT - repeated exposure

Product:

Remarks: Not expected to be a hazard.

Aspiration toxicity

Product:

Not considered 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 representa- tive of the product as a whole, rather than for individual com- ponent(s).(LL/EL/IL50 expressed as the nominal amount of
----------------------	---

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

sion 1.0	Revision Date: 04/12/201	6 Print Date: 04/13/2
	product required to pre	epare aqueous test extract).
Ecotoxicity		
Product:		
Toxicity to fish (Acute toxici-	:	
ty)	Remarks: Expected to LL/EL/IL50 > 100 mg/I	be practically non toxic:
Toxicity to daphnia and other	:	
aquatic invertebrates (Acute toxicity)	Remarks: Expected to LL/EL/IL50 > 100 mg/I	be practically non toxic:
Toxicity to algae (Acute tox-	:	
icity)	Remarks: Expected to LL/EL/IL50 > 100 mg/I	be practically non toxic:
Toxicity to fish (Chronic tox-	: Remarks: Data not ava	ailable
icity)		
Toxicity to daphnia and other	: Remarks: Data not ava	ailable
aquatic invertebrates (Chron- ic toxicity)		
Toxicity to bacteria (Acute	: Remarks: Data not ava	ailable
toxicity)		
Persistence and degradabili	у	
Product:		
Biodegradability		be not readily biodegradable. expected to be inherently biodegrad
	ble, but contains comp	onents that may persist in the envir
	ment.	
Bioaccumulative potential		
Product:	Demoder Orateire	
Bioaccumulation	cumulate.	mponents with the potential to bioac
Mobility in soil		
Product:		
Mobility		most environmental conditions. dsorb to soil particles and will not be
	Remarks: Floats on wa	ater.
Other adverse effects		
no data available		
Product:		

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.0	Revision Date: 04/12/2016	Print Date: 04/13/2016
Additional ecological infor- mation	 Product is a mixture of non-volat expected to be released to air in Not expected to have ozone dep cal ozone creation potential or g 	any significant quantities. Detion potential, photochemi-
	Poorly soluble mixture. May cause physical fouling of ac	quatic organisms.
	Mineral oil is not expected to can aquatic organisms at concentrat	

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues :	Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Waste, spills or used product is dangerous waste.
	Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or na- tional requirements and must be complied with.
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.

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	: Not applicable
Ship type	: Not applicable
Product name	: Not applicable
Special precautions	: Not applicable

Special precautions for user

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.0	Revision Date: 04/12/2016	Print Date: 04/13/2016
Remarks	: Special Precautions: Refer to for special precautions which a needs to comply with in connect	user needs to be aware of or
Additional Information	: MARPOL Annex 1 rules apply	for bulk shipments by sea.

SECTION 15. REGULATORY INFORMATION

California Prop 65	: This product does not contain any chemicals known to Stat of California to cause cancer, birth defects, or any other re- productive harm.	
The components of this proc	act are reported in the following inventories:	
EINECS	: All components listed or polymer 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.

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.

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 EC50 = Effective Concentration fifty ECETOC = European Center on Ecotoxicology and Toxicology Of Chemicals ECHA = European Chemicals Agency

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Chemia EL50 = ENCS Invento EWC = GHS = Labelli IARC = IATA = IC50 = IL50 = IMDG = INV = 0 IP346 = determ KECI = LC50 = LD50 = LL/EL/ LL50 = MARP Pollutio NOEC, served OE_HF PBT = PICCS Substa PNEC	 CS = The European Inventory of Existing Connical Substances Effective Loading fifty S = Japanese Existing and New Chemical Substancy European Waste Code Globally Harmonised System of Classification International Agency for Research on Cancer International Agency for Research on Cancer Inhibitory Concentration fifty Inhibitory Level fifty S = International Maritime Dangerous Goods Chinese Chemicals Inventory S = Institute of Petroleum test method N° 346 Imination of polycyclic aromatics DMSO-extract Korea Existing Chemicals Inventory Lethal Concentration fifty Lethal Dose fifty per cent. L/IL = Lethal Loading/Effective Loading/Inhibitor POL = International Convention for the Prever
Chemi RID = gerous SKIN_ STEL = TRA = TSCA TWA =	tion From Ships C/NOEL = No Observed Effect Concentration ad Effect Level HPV = Occupational Exposure - High Production Persistent, Bioaccumulative and Toxic CS = Philippine Inventory of Chemicals and Chi- tances C = Predicted No Effect Concentration CH = Registration Evaluation And Authorisatio nicals = Regulations Relating to International Carriag us Goods by Rail LDES = Skin Designation L = Short term exposure limit = Targeted Risk Assessment A = US Toxic Substances Control Act = Time-Weighted Average = very Persistent and very Bioaccumulative
Revision Date : 04/12/2	

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.