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SECTION	I 1. IDENTIFICATION						
Prod	uct name	:	Shell Corena S4	२ ४६			
Prod	uct code	:	001D7786	001D7786			
Man	ufacturer or supplier's	deta	ails				
Man	ufacturer/Supplier	:	Shell Canada Pr 400 - 4th Avenue Calgary AB T2P Canada	S.W			
Tele Tele	phone fax	:	(+1) 8006611600 (+1) 4033848345				
Eme ber	rgency telephone num-	:	(US)	hr): 1 (703) 527-3887 or 1 (800) 424-9300): (+1) 613-996-6666; Toll Free: 1-888-CAN-			
Reco	Recommended use of the chemical and restrictions on use						

Recommended	use or	tne	cnemical	ana	restrictions	on	us

Recommended use : Compressor oil.	Recommended use	: Compressor oil.
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SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Based on available data this substance / mixture does not meet the classification criteria.

GHS label elements

Hazard pictograms	: No Hazard Symbol required
Signal word	: No signal word
Hazard statements	 PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria. HEALTH HAZARDS: Not classified as a health hazard under GHS criteria. ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.
Precautionary statements	 Prevention: No precautionary phrases. Response: No precautionary phrases. Storage:
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No precautionary phrases. **Disposal:** No precautionary phrases.

Other hazards which do not result in classification

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis. Used oil may contain harmful impurities.

Not classified as flammable but will burn.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance name	: Shell Corena S4 R 46

Chemical nature : Blend of polyolefins and additives.

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Alkaryl amine	68411-46-1	1 - 3
Dialkyl thiophosphate ester	268567-32-4	0.1 - 0.9

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.
In case of eye contact	:	Flush eye with copious quantities of water. Remove contact lenses, if present and easy to do. Continue rinsing. If persistent irritation occurs, obtain medical attention.
If swallowed	:	In general no treatment is 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.
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.

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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- tive equipment and emer- gency procedures	:	Avoid contact with skin and eyes.
Environmental precautions	:	Use appropriate containment to avoid environmental contami- nation. 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 Chapter 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Safety Data Sheet.
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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 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.
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 tem- peratures because of possible risk of distortion.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

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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

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 concentra-
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		select respirator cific conditions of Check with resp Where air-filterin priate combinati Select a filter su	which is adequate to protect worker health, ry protection equipment suitable for the spe- of use and meeting relevant legislation. biratory protective equipment suppliers. ng respirators are suitable, select an appro- ion of mask and filter. uitable for the combination of organic gases type A/Type P boiling point >65°C (149°F)].
	and protection Remarks	gloves approved US: F739) made suitable chemic gloves Suitabilit usage, e.g. freq sistance of glov glove suppliers. Personal hygier Gloves must on gloves, hands s cation of a non- For continuous through time of 480 minutes wh short-term/splas recognize that s may not be avait time maybe acc and replacemer a good predicto dependent on th Glove thickness	ntact with the product may occur the use of d to relevant standards (e.g. Europe: EN374, e from the following materials may provide al protection. PVC, neoprene or nitrile rubber y and durability of a glove is dependent on uency and duration of contact, chemical re- e material, dexterity. Always seek advice from Contaminated gloves should be replaced. ne is a key element of effective hand care. ly be worn on clean hands. After using hould be washed and dried thoroughly. Appli- perfumed moisturizer is recommended. contact we recommend gloves with break- more than 240 minutes with preference for > ere suitable gloves can be identified. For sh protection we recommend the same, but suitable gloves offering this level of protection ilable and in this case a lower breakthrough exptable so long as appropriate maintenance nt regimes are followed. Glove thickness is not r of glove resistance to a chemical as it is ne exact composition of the glove material. a should be typically greater than 0.35 mm and glove make and model.
Ey	ve protection		ndled such that it could be splashed into eyes, ear is recommended.
Sk	in and body protection	work clothes.	is not ordinarily required beyond standard ce to wear chemical resistant gloves.
Th	nermal hazards	: Not applicable	
Pr	otective measures		tive equipment (PPE) should meet recom- al standards. Check with PPE suppliers.

Environmental exposure controls

General advice	: Take appropriate measures to fulfill the requirements of rele- vant environmental protection legislation. Avoid contamination
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			necessary, preve charged to waste municipal or indu discharge to surfa Local guidelines	nt by following advice given in Chapter 6. If nt undissolved material from being dis- water. Waste water should be treated in a strial waste water treatment plant before ace water. on emission limits for volatile substances d for the discharge of exhaust air containing
SECTION	9. PHYSICAL AND CHI	ΞΜΙΟ	AL PROPERTIE	S
Appea	arance	:	Liquid at room te	emperature.
Colou	ır	:	light brown	
Odou	r	:	Slight hydrocarb	on
Odou	r Threshold	:	Data not availab	le
рН		:	Not applicable	
pour p	point	:	-45 °C / -49 °F Method: ISO 30	16
Initial range	boiling point and boiling	:	> 280 °C / 536 ° estimated value	
Flash	point	:	230 °C / 446 °F	
			Method: ISO 259	92
Evapo	pration rate	:	Data not availab	le
Flamr	nability (solid, gas)	:	Data not availab	le
Upper	r explosion limit	:	Typical 10 %(V)	
Lowe	r explosion limit	:	Typical 1 %(V)	
Vapo	ur pressure	:	< 0.5 Pa (20 °C estimated value	
Relati	ve vapour density	:	> 1 estimated value	(s)
Relati	ve density	:	0.843 (15 °C / 5	9°F)
Densi	ty	:	843 kg/m3 (15.0	°C / 59.0 °F)Method: ISO 12185
	ility(ies) iter solubility	:	negligible	
Sol	ubility in other solvents	:	Data not availab	le

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octa	ition coefficient: n- nol/water p-ignition temperature	: Pow: > 6 (based on info : > 320 °C / 608	ormation on similar products) 3 °F	
V	osity iscosity, dynamic iscosity, kinematic	Method: ISO 3	0.0 °C / 104.0 °F) 3104 00 °C / 212 °F)	
Exp	losive properties	: Not classified		
Oxio	lizing properties	: Data not avail	able	
Con	ductivity	: This material	is not expected to be a static accumulator.	
Dec	omposition temperature	: Data not avail	able	

SECTION 10. STABILITY AND REACTIVITY

Reactivity	The product does not pose any further reactivir addition to those listed in the following sub-par	
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 ex during normal storage.	pected to form

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment	0	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

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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.

Components:

Dialkyl thiophosphate ester:

Remarks: May cause an allergic skin reaction in sensitive individuals.

Germ cell mutagenicity

Product:

Genotoxicity in vivo

: Remarks: Not considered a mutagenic hazard.

Carcinogenicity

Product:

Remarks: Not expected to be carcinogenic.

Reproductive toxicity

Product:

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Effects on fertility

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: Slightly irritating to respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment	:	Ecotoxicological data have not been determined for this product. Information given is based on a knowledge of the and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is tive of the product as a whole, rather than for inco ponent(s).(LL/EL/IL50 expressed as the nominal product required to prepare aqueous test extract	e components s representa- lividual com- amount of
Ecotoxicity			
Product: Toxicity to fish (Acute toxici- ty)	:	Remarks: Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l	
Toxicity to crustacean (Acute toxicity)	:	Remarks: Expected to be practically non toxic:	
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				LL/EL/IL50 > 100	mg/l		
	Toxicity to algae/aquatic plants (Acute toxicity)		:	Remarks: Expect LL/EL/IL50 > 100	ed to be practically non toxic: mg/l		
	oxicity ity)	to fish (Chronic tox-	:	: Remarks: Data not available			
		to crustacean	:	: Remarks: Data not available			
Ťc	oxicity	c toxicity) to microorganisms oxicity)	:	Remarks: Data not available			
Pe	ersist	ence and degradabil	ity				
	Major constituents are ex		ed to be not readily biodegradable. s are expected to be inherently biodegrada- components that may persist in the environ-				
Bi	ioacc	umulative potential					
<u>Pr</u>	roduc	<u>t:</u>					
Bi	ioaccu	imulation	:	Remarks: Contair cumulate.	ns components with the potential to bioac-		
-	artitior ctanol/	n coefficient: n- /water	:	: Pow: > 6 Remarks: (based on information on similar products)			
M	obility	y in soil					
<u>Pr</u>	roduc	<u>t:</u>					
М	Mobility		:		under most environmental conditions. will adsorb to soil particles and will not be		
				Remarks: Floats	on water.		
Ot	ther a	dverse effects					
Ac	roduc dditior ation	<u>t:</u> nal ecological infor-	:	expected to be re Not expected to h cal ozone creation Poorly soluble mix	are of non-volatile components, which are not leased to air in any significant quantities. have ozone depletion potential, photochemi- n potential or global warming potential. xture. cal fouling of aquatic organisms.		

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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 meth- ods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses
	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.
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.

SECTION 14. TRANSPORT INFORMATION

National Regulations

TDG

Not regulated as a dangerous good

International Regulations

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

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.

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Additional Information		: MARPOL Anne	ex 1 rules apply for bulk shipments by sea.

SECTION 15. REGULATORY INFORMATION

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

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

The components of this product are reported in the following inventories:				
EINECS	:	All components listed or polymer exempt.		
TSCA	:	All components listed.		
DOI				
DSL	:	All components listed.		

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; 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; CPR - Controlled Products Regulations; DIN -Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing 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; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on

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the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

A vertical bar (|) in the left margin indicates an amendment from the previous version. Revision Date : 2017-05-05

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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