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SECTION	SECTION 1. IDENTIFICATION					
Proc	uct name	:	: Shell Corena S4 R 32			
Proc	uct code	:	001D7785			
Man	Manufacturer or supplier's		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-)		
Rec	Recommended use of the chemical and restrictions on use					
Reco	ommended use	:	Compressor oil.			

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

1/	Storage: 800001006427
Precautionary statements	 Prevention: No precautionary phrases. Response: No precautionary phrases.
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.
Signal word	: No signal word
Hazard pictograms	: No Hazard Symbol required

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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 32

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	ot expected to be a health haza nditions.	ard when used under normal
If inhaled	o treatment necessary under ne symptoms persist, obtain medi	
In case of skin contact	emove contaminated clothing. r and follow by washing with so persistent irritation occurs, obta	ap if available.
In case of eye contact	ush eye with copious quantities persistent irritation occurs, obta	
If swallowed	general no treatment is necess e swallowed, however, get me	
Most important symptoms and effects, both acute and delayed	l acne/folliculitis signs and sym black pustules and spots on th gestion may result in nausea, v	e skin of exposed areas.
Protection of first-aiders	hen administering first aid, ens propriate personal protective e cident, injury and surroundings	equipment according to the
Notes to physician	eat 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 approp ate 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 b worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning mar 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 r steel or high density polyethylene. Unsuitable material: PVC.	nild
Container Advice	Polyethylene containers should not be exposed to high ten peratures because of possible risk of distortion.	า-

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.

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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, precau- tions should be taken to avoid breathing of material.
	If engineering controls do not maintain airborne concentra- tions to a level which is adequate to protect worker health,
	select respiratory protection equipment suitable for the spe- cific conditions of use and meeting relevant legislation.

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		Where air-filt priate combir Select a filter	espiratory protective equipment suppliers. ering respirators are suitable, select an appro- nation of mask and filter. suitable for the combination of organic gases [Type A/Type P boiling point >65°C (149°F)].
	d protection emarks	 and vapours [Type A/Type P boiling point >65°C (149°F)] Where hand contact with the product may occur the use o gloves approved to relevant standards (e.g. Europe: EN37 US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubb 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 f 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. Ap cation of a non-perfumed moisturizer is recommended. For continuous contact we recommend gloves with break-through time of more than 240 minutes with preference for 480 minutes where suitable gloves offering this level of protectimary not be available and in this case a lower breakthroug time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model. 	
Eye	protection		handled such that it could be splashed into eyes, ewear is recommended.
Skin	and body protection	work clothes.	on is not ordinarily required beyond standard ctice to wear chemical resistant gloves.
Ther	mal hazards	: Not applicabl	e
Prote	ective measures		tective equipment (PPE) should meet recom- onal standards. Check with PPE suppliers.

Environmental exposure controls

General advice	Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Chapter 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a
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			discharge to surf Local guidelines	istrial waste water treatment plant before ace water. on emission limits for volatile substances d for the discharge of exhaust air containing	
	9. PHYSICAL AND CHI	EMIC			
	arance	:	Liquid at room to	emperature.	
Colou	ır	:	light brown		
Odou	r	:	Slight hydrocart	pon	
Odou	r Threshold	:	Data not availat	le	
рН		:	Not applicable		
pour p	point	:	-45 °C / -49 °F Method: ASTM	D97	
Initial range	boiling point and boiling	:	> 280 °C / 536 ° estimated value		
Flash	point	:	218 °C / 424 °F		
			Method: ASTM	D92	
Evapo	oration rate	:	Data not availat	le	
Flamr	mability (solid, gas)	:	Data not availat	le	
Uppe	r explosion limit	:	Typical 10 %(V)		
Lowe	r explosion limit	:	Typical 1 %(V)		
Vapo	ur pressure	: < 0.5 Pa (20 °C / 68 °F) estimated value(s)			
Relati	ive vapour density	:	> 1 estimated value	(s)	
Relati	ive density	:	0.830 (15 °C / 5	9 °F)	
Densi	ity	:	: 830 kg/m3 (15.0 °C / 59.0 °F)Method: ASTM D1298		
	ility(ies) ater solubility	:	negligible		
Sol	lubility in other solvents	: Data not available			
	ion coefficient: n- ol/water	: Pow: > 6 (based on information on similar products)			

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Auto	-ignition temperature	: >	320 °C / 608 °I	=	
Visc Vi	osity scosity, dynamic	: D	ata not availab	e	
Vi	scosity, kinematic		2 mm2/s (40.0 ethod: ASTM [
			mm2/s (100 °C ethod: ASTM [
Expl	osive properties	: N	: Not classified		
Oxid	izing properties	: D	: Data not available		
Con	ductivity	: TI	nis material is r	not expected to be a static accumulator.	
Deco	omposition temperature	: D	ata not availab	e	

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.
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

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Produ	uct:			
Acute	oral toxicity	: LD50 (rat): > 5,0 Remarks: Exped	000 mg/kg cted to be of low toxicity:	
Acute	inhalation toxicity	: Remarks: Not connormal condition	onsidered to be an inhalation hazard under ns 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:

Effects on fertility

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

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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 determine for this product. Information given is based on a knowledge of t and the ecotoxicology of similar products. Unless indicated otherwise, the data presented tive of the product as a whole, rather than for ir ponent(s).(LL/EL/IL50 expressed as the nomina product required to prepare aqueous test extra	he components l is representa- ndividual com- al 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: LL/EL/IL50 > 100 mg/l	
Toxicity to algae/aquatic : plants (Acute toxicity)	Remarks: Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l	
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	Toxicity city)	to fish (Chronic tox-	:	Remarks: Data no	ot available			
		to crustacean c toxicity)	:	Remarks: Data no	bt available			
		to microorganisms oxicity)	:	Remarks: Data not available				
F	Persist	ence and degradabil	ity					
	Produc							
E	Biodegr	adability	:	Major constituents	ed to be not readily biodegradable. s are expected to be inherently biodegrada- components that may persist in the environ-			
E	Bioacc	umulative potential						
	Produc							
E	Bioaccu	imulation	:	Remarks: Contair cumulate.	is components with the potential to bioac-			
	Partitior octanol/	n coefficient: n- /water	:	: Pow: > 6 Remarks: (based on information on similar products)				
N	Mobility	y in soil						
<u> </u>	Produc	<u>t:</u>						
Ν	Mobility		:		under most environmental conditions. vill adsorb to soil particles and will not be			
				Remarks: Floats of	on water.			
C	Other a	dverse effects						
<u> </u>	Produc	<u>t:</u>						
	Additior mation	nal ecological infor-	:	expected to be re Not expected to h	rre of non-volatile components, which are not leased to air in any significant quantities. ave ozone depletion potential, photochemi- n potential or global warming potential.			
				Poorly soluble mix May cause physic	xture. al fouling of aquatic organisms.			

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	
Waste from residues	: Waste product should not be allowed to contaminate soil or
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		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

TDG
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

Not applicable
Not applicable
Not applicable
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

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:

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EINECS		: All components listed or polymer exempt.		
TSCA		: All components listed.		
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 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 : 2016-05-03

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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