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SECTION	1. IDENTIFICATION			
Produ	ct name	:	Shell Corena S4 I	P 100
Produ	ct code	:	001D7789	
Manufacturer or supplier's details				
Manuf	acturer/Supplier	:	Shell Canada Pro 400 - 4th Avenue Calgary AB T2P Canada	S.W
Telepł Telefa		:	(+1) 8006611600 (+1) 4033848345	
Emerg ber	gency telephone num-	:	(US)	hr): 1 (703) 527-3887 or 1 (800) 424-9300 ): (+1) 613-996-6666; Toll Free: 1-888-CAN- )
Recor	Recommended use of the chemical and restrictions on use			

Recommended use	: Compressor oil.

# **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	<ul> <li>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.</li> </ul>
Precautionary statements	<ul> <li>Prevention: No precautionary phrases.</li> <li>Response: No precautionary phrases.</li> <li>Storage:</li> </ul>
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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 P 100
Chemical nature	÷	Blend of synthetic esters and additives.

#### Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Alkaryl amine	68411-46-1	1 - 3

#### **SECTION 4. FIRST-AID MEASURES**

General advice	Not expected to be a health hazard when used unde conditions.	r normal
If inhaled	No treatment necessary under normal conditions of If symptoms persist, obtain medical advice.	use.
In case of skin contact	Remove contaminated clothing. Flush exposed area ter and follow by washing with soap if available. If persistent irritation occurs, obtain medical attentior	
In case of eye contact	Flush eye with copious quantities of water. Remove contact lenses, if present and easy to do. C rinsing. If persistent irritation occurs, obtain medical attention	
If swallowed	In general no treatment is necessary unless large quare swallowed, however, get medical advice.	lantities
Most important symptoms and effects, both acute and delayed	Oil acne/folliculitis signs and symptoms may include of black pustules and spots on the skin of exposed a Ingestion may result in nausea, vomiting and/or diar	areas.
Protection of first-aiders	When administering first aid, ensure that you are we appropriate personal protective equipment according 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**

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 con-

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trols. 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 concentrations to a level which is adequate to protect worker health,
		select respiratory protection equipment suitable for the spe-

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		Check with r Where air-fil priate combi Select a filte	ns of use and meeting relevant legislation. respiratory protective equipment suppliers. tering respirators are suitable, select an appro- nation of mask and filter. r suitable for the combination of organic gases [Type A/Type P boiling point >65°C (149°F)].
	Hand protection Remarks		contact with the product may occur the use of oved to relevant standards (e.g. Europe: EN374, nade from the following materials may provide mical protection. PVC, neoprene or nitrile rubber bility and durability of a glove is dependent on frequency and duration of contact, chemical re- glove material, dexterity. Always seek advice from ers. Contaminated gloves should be replaced. giene is a key element of effective hand care. to only be worn on clean hands. After using ds should be washed and dried thoroughly. Appli- on-perfumed moisturizer is recommended. bus contact we recommend gloves with break- e of more than 240 minutes with preference for > where suitable gloves can be identified. For plash protection we recommend the same, but at suitable gloves offering this level of protection available and in this case a lower breakthrough acceptable so long as appropriate maintenance ment regimes are followed. Glove thickness is not ictor of glove resistance to a chemical as it is on the exact composition of the glove material. less should be typically greater than 0.35 mm in the glove make and model.
Eye	protection		handled such that it could be splashed into eyes, vewear is recommended.
Skin	and body protection	<ul> <li>Skin protection is not ordinarily required beyond sta work clothes.</li> <li>It is good practice to wear chemical resistant gloves</li> </ul>	
Ther	mal hazards	: Not applicab	le
Prote	ective measures		otective equipment (PPE) should meet recom- onal 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 of the environment by following advice given in Chapter 6. If necessary, prevent undissolved material from being dis-		
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			municipal or indu discharge to surfa Local guidelines	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
ECTION	9. PHYSICAL AND CHI	ЕМІС	CAL PROPERTIE	S
Appe	arance	:	Liquid at room te	emperature.
Colou	ır	:	colourless	
Odou	r	:	Slight hydrocarb	on
Odou	r Threshold	:	Data not availab	le
pН		:	Not applicable	
pour	point	:	-39 °C / -38 °F Method: ASTM [	097
Initial range	boiling point and boiling	:	> 280 °C / 536 ° estimated value(	
Flash	point	:	260 °C / 500 °F	
			Method: ASTM [	092 (COC)
Evap	oration rate	:	Data not availab	le
Flam	mability (solid, gas)	:	Data not availab	le
Uppe	r explosion limit	:	Typical 10 %(V)	
Lowe	r explosion limit	:	Typical 1 %(V)	
Vapo	ur pressure	:	< 0.5 Pa (20 °C estimated value(	
Relat	Relative vapour density		> 1 estimated value(	s)
Relat	ive density	:	: 0.988 (15 °C / 59 °F)	
Dens	ity	:	988 kg/m3 (15.0	°C / 59.0 °F)Method: ASTM D1298
	bility(ies) ater solubility	:	negligible	
So	lubility in other solvents	:	Data not availab	le
Partit	ion coefficient: n-	:	Pow: > 6	

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octa	nol/water	(based on in	formation on similar products)	
Auto	-ignition temperature	: > 320 °C / 6	08 °F	
	osity iscosity, dynamic	: Data not ava	ilable	
V	iscosity, kinematic		: 100 mm2/s (40.0 °C / 104.0 °F) Method: ASTM D445	
		10.2 mm2/s Method: AS	(100 °C / 212 °F) FM D445	
Exp	osive properties	: Not classifie	d	
Oxic	lizing properties	: Data not ava	ilable	
Con	ductivity	: This materia	I is not expected to be a static accumulator.	
Decomposition temperature		: Data not ava	ilable	

# 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.	ı
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 for during normal storage.	rm

# 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).
		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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Product: Acute oral toxicity		: LD50 (rat): > Remarks: Exp	5,000 mg/kg pected to be of low toxicity:
Acute inhalation toxicity		: Remarks: No normal condit	t considered to be an inhalation hazard under ions of use.
Acute dermal toxicity			): > 5,000 mg/kg pected 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:

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.

## STOT - single exposure

## Product:

Remarks: Not expected to be a hazard.

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### 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 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 product required to prepare aqueous test extract).
Ecotoxicity		
Product: Toxicity to fish (Acute toxici- ty)	:	Remarks: Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l
Toxicity to 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
Toxicity to fish (Chronic tox- icity)	:	Remarks: Data not available
Toxicity to crustacean	:	Remarks: Data not available
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	(Chronic toxicity) Toxicity to microorganisms (Acute toxicity)		:	: Remarks: Data not available		
	Persist	ence and degradabil	ity			
	Product: Biodegradability		:	Remarks: Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegrad ble, but contains components that may persist in the enviro ment.		
	Bioacc	umulative potential				
	Produc	<u>:t:</u>				
	Bioaccu	umulation	cumulate. : Pow: > 6		components with the potential to bioac-	
	Partition octanol	n coefficient: n- /water			on information on similar products)	
	Mobility in soil					
	Produc	<u>:t:</u>				
	Mobility :			under most environmental conditions. vill adsorb to soil particles and will not be		
				Remarks: Floats of	on water.	
	Other a	adverse effects				
	Produc	<u>:t:</u>				
	Addition 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	<ul> <li>Recover or recycle if possible.</li> <li>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.</li> <li>Do not dispose into the environment, in drains or in water</li> </ul>

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		courses	
		ground water, o	should not be allowed to contaminate soil or r be disposed of into the environment. 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.	
	al legislation harks		l be in accordance with applicable regional, cal 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.

## 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.

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The c EINEC	• •	•	n the following inventories: s listed or polymer exempt.
TSCA		: All components	s listed.
DSL		: All components	s 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 : 2017-02-17

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

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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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