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SECTION 1	I. IDENTIFICATION					
Produc	ct name	:	Shell Rotella T1 1	0W		
Produc	ct code	:	001D5427	001D5427		
Manufacturer or supplier's o			ails			
Manuf	acturer/Supplier	:	Shell Canada Pro 400 - 4th Avenue Calgary AB T2P Canada	S.W		
Teleph Telefa			(+1) 8006611600 (+1) 4033848345			
Emerg ber	ency telephone num-	:	(US)	hr): 1 (703) 527-3887 or 1 (800) 424-9300): (+1) 613-996-6666; Toll Free: 1-888-CAN-)		
Recon	nmended use of the c	hen	nical and restriction	ons on use		
Recon	nmended use	:	Engine oil.			

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

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Precautionary statements	 Prevention: No precautionary phrases. Response: No precautionary phrases. Storage:
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 Rotella T1 10W
Chemical nature	 Highly refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO- extract, according to IP346.
	* contains one or more of the following CAS-numbers: 64742- 53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-65-0, 68037-01-4, 72623-86-0, 72623-87-1, 8042-47-5, 848301-69- 9.

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Sulphurised calcium phenate	Not Assigned	1 - 3
Zinc dialkyl dithiophosphate	68649-42-3	1 - 2.4
Interchangeable low viscosity 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. 	
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 and effects, both acute and	: Oil acne/folliculitis signs and symptoms may include formatio of black pustules and spots on the skin of exposed areas.	n

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delay	ed	Ingestion may r	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 symptom	atically.	

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
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		suitable mat	erial and dispose of properly.			
Addit	ional advice	see Chapter For guidance	 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. 			
SECTION	7. HANDLING AND S	TORAGE				
Gene	eral Precautions	vapours, mis Use the info sessment of	haust ventilation if there is risk of inhalation of sts or aerosols. rmation in this data sheet as input to a risk as- local circumstances to help determine appropri- for safe handling, storage and disposal of this			
Advid	ce on safe handling	Avoid inhalir When handli worn and pro Properly disp	: 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.			
Avoid	dance of contact	: Strong oxidis	sing agents.			
Prod	uct Transfer	Proper groui	 This material has the potential to be a static accumulator. Proper grounding and bonding procedures should be used during all bulk transfer operations. 			
Stora Othe	age r data	place.	ner tightly closed and in a cool, well-ventilated			
			pient temperature.			
Pack	aging material	: Suitable mat steel or high	terial: For containers or container linings, use mild density polyethylene. naterial: PVC.			
Cont	ainer 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

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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
		TWA (Mist)	5 mg/m3	OSHA Z-1
		TWA (Inhal- able fraction)	5 mg/m3	ACGIH

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 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 mainte- nance. Retain drain downs in sealed storage pending disposal or
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		washing hands a drinking, and/or protective equip	good personal hygiene measures, such as after handling the material and before eating, smoking. Routinely wash work clothing and ment to remove contaminants. Discard con- ng and footwear that cannot be cleaned.
Pers	onal protective equip	ment	
Resp	iratory protection	conditions of us In accordance w tions should be If engineering co tions to a level w select respirator cific conditions of Check with resp Where air-filterin priate combinati Select a filter su	rotection is ordinarily required under normal e. with good industrial hygiene practices, precau- taken to avoid breathing of material. ontrols do not maintain airborne concentra- which is adequate to protect worker health, by protection equipment suitable for the spe- of use and meeting relevant legislation. biratory protective equipment suppliers. Ing respirators are suitable, select an appro- on of mask and filter. bitable for the combination of organic gases by pe A/Type P boiling point >65°C (149°F)].
Hand	I protection		
	marks	gloves approved US: F739) made suitable chemica gloves Suitabilit usage, e.g. freq sistance of glove glove suppliers. Personal hygien Gloves must on gloves, hands si cation of a non-p For continuous of through time of 480 minutes wh short-term/splas recognize that s may not be avai time maybe acc and replacement a good predictor dependent on th Glove thickness	htact 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. he is a key element of effective hand care. by 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 uitable gloves offering this level of protection lable and in this case a lower breakthrough eptable so long as appropriate maintenance at regimes are followed. Glove thickness is not r of glove resistance to a chemical as it is ne exact composition of the glove material. should be typically greater than 0.35 mm he glove make and model.
Eye p	protection		ndled such that it could be splashed into eyes, ear is recommended.

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Skin	and body protection	work clothes.	is not ordinarily required beyond standard ce to wear chemical resistant gloves.
Therr	mal hazards	: Not applicable	
Prote	ective 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 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 municipal or industrial waste water treatment plant before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

: Liquid at room temperature.
: amber
: Slight hydrocarbon
: Data not available
: Not applicable
: -33 °C / -27 °F Method: ASTM D97
: > 280 °C / 536 °F estimated value(s)
: 215 °C / 419 °F
Method: ASTM D92
: Data not available
: Data not available
: Typical 10 %(V)

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Lo	wer explosion limit	: Typical 1 %(V)	
Va	pour pressure	: < 0.5 Pa (20 °C / 68 °F) estimated value(s)	
Re	lative vapour density	: > 1 estimated value(s)	
Re	lative density	: 0.876 (15 °C / 59 °F)	
De	nsity	: 876 kg/m3 (15.0 °C / 59.0 °F)Method: ASTM D4052	
	lubility(ies) Water solubility	: negligible	
:	Solubility in other solvents	: Data not available	
	rtition coefficient: n- anol/water	: Pow: > 6 (based on information on similar products)	
Au	to-ignition temperature	: > 320 °C / 608 °F	
	cosity Viscosity, dynamic	: Data not available	
	Viscosity, kinematic	: 6.5 mm2/s (100 °C / 212 °F) Method: ASTM D445	
		38 mm2/s (40.0 °C / 104.0 °F) Method: ASTM D445	
Ex	plosive properties	: Not classified	
Ox	idizing properties	: Data not available	
Co	nductivity	: This material is not expected to be a static accumula	itor.
De	composition 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.	

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Incom	patible materials	: Strong oxidising	g agents.
Hazar produ	dous decomposition cts	: Hazardous dec during normal s	omposition products are not expected to form 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

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:

Genotoxicity in vivo

: Remarks: Not considered a mutagenic hazard.

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Carcinogenicity

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:

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: Continuous contact with used engine oils has caused skin cancer in animal tests.

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

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			Unless indicated tive of the product ponent(s).(LL/EL/	ology of similar products. otherwise, the data presented is representa- t as a whole, rather than for individual com- IL50 expressed as the nominal amount of to prepare aqueous test extract).
Ecoto	oxicity			
Product: Toxicity to fish (Acute toxici- ty)		:	Remarks: Expect LL/EL/IL50 > 100	ed to be practically non toxic: 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	
Toxic icity)	Toxicity to fish (Chronic tox- icity)		Remarks: Data no	ot available
Toxicity to crustacean (Chronic toxicity) Toxicity to microorganisms (Acute toxicity)			Remarks: Data not available Remarks: Data not available	
•	stence and degradabil	ity		
<u>Product:</u> Biodegradability		:	Remarks: Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegrada- ble, but contains components that may persist in the environ- ment.	
Bioad	cumulative potential			
<u>Produ</u> Bioac	<u>uct:</u> cumulation	:	Remarks: Contair cumulate.	ns components with the potential to bioac-
Partition coefficient: n- octanol/water		:	Pow: > 6 Remarks: (based on information on similar products)	
Mobi	lity in soil			
Prod				
Mobility		:	: Remarks: Liquid under most environmental conditions. If it enters soil, it will adsorb to soil particles and will not be mobile.	
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		Remarks: Floats	on water.	
Other	adverse effects			
Product: Additional ecological infor- mation		expected to be re Not expected to h cal ozone creatio Poorly soluble mi May cause physio Mineral oil is not	 Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential. Poorly soluble mixture. May cause physical fouling of aquatic organisms. Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l. 	

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

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

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Pollution category Ship type Product name Special precautions		 Not applicable Not applicable Not applicable Not applicable Not applicable 			
Special pr	recautions 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 Anne>	: 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:			
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 Tox-

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icology 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 : 2016-04-29

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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