According to OSHA Hazard Communication Standard, 29 CFR

1910.1200

Version 1.2

Revision Date: 07/30/2015

Print Date: 07/31/2015

SECTION 1. IDENTIFICATION

Product name

Rotella T6 5W-40 (CJ-4)

Shell Rotella The synthetic Extreme

Temperature SAE 54-40

Product code

001D5438

Heavy Duty Diesel

Engine oil

Manufacturer or supplier's details

Manufacturer/Supplier

: Shell Oil Products US

P.O. Box 4427

Houston TX 77210-4427

USA

SDS Request

: (+1) 877-276-7285

Customer Service

Emergency telephone number

Spill Information
Health Information

877-504-9351

: 877-242-7400

Recommended use of the chemical and restrictions on use

Recommended use

: Heavy Duty Engine oil.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS Label element

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 GHScriteria.

ENVIRONMENTAL HAZARDS:

Not classified as an environmental hazard under GHS criteria.

Precautionary statements

Prevention:

No precautionary phrases.

Response:

No precautionary phrases.

Storage:

No precautionary phrases.

Disposal:

No precautionary phrases.

Other hazards which do not result in classification

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

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.2

Revision Date: 07/30/2015

Print Date: 07/31/2015

Used oil may contain harmful impurities. Not classified as flammable but will burn.

The classification of this material is based on OSHA HCS 2012 criteria.

Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 3. COMPOSITION/INFORMATION ONINGREDIENTS

Chemical nature

: Synthetic base oil and additives.

Highly refined mineral oil.

The highly refined mineral oil contains <3% (w/w) DMSO-

extract, according to IP346.

The highly refined mineral oil is only present as additive dilu-

ent.

Hazardous components

Chemical Name	Synonyms	CAS-No.	Concentration (%)
Distillates (Fischer -		848301-69-9	0 - 90
and the same and t	cyclic and linear		

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 delayed

ind

: 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

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.2

Revision Date: 07/30/2015

Print Date: 07/31/2015

incident, injury and surroundings.

Immediate medical attention, special treatment

: Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

: Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing media

Do not use water in a jet.

Specific hazards during firefighting 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 methods

: 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, protective equipment and emergency procedures

: Avoid contact with skin and eyes.

Environmental precautions

: Use appropriate containment to avoid environmental contamination. 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

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.2

Revision Date: 07/30/2015

Print Date: 07/31/2015

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 STORAGE

Technical measures

: Use local exhaust ventilation if there is risk of inhalation of

vapours, mists or aerosols.

Use the information in this data sheet as input to a riskassessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this

material.

Precautions for safe handling

: Avoid prolonged or repeated contact with skin.

Avoid inhaling vapour and/or mists.

When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

Properly dispose of any contaminated rags or cleaning mate-

rials in order to prevent fires.

Avoidance of contact

Strong oxidising agents.

Product Transfer

: This material has the potential to be a static accumulator.

Proper grounding and bonding procedures should be used

during all bulk transfer operations.

Storage

Other data

: Keep container tightly closed and in a cool, well-ventilated

place.

Use properly labeled and closable containers.

Store at ambient temperature.

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

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

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.2

Revision Date: 07/30/2015

Print Date: 07/31/2015

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 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 undernormal 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-

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.2

Revision Date: 07/30/2015

Print Date: 07/31/2015

tions to a level which is adequate to protect workerhealth, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for the combination of organic gases and vapours [Type A/Type P boiling point >65°C (149°F)].

Hand protection Remarks

Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374. US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubber 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 from 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. Application of a non-perfumed moisturizer is recommended. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same, but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not 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

If material is handled such that it could be splashed into eyes, protective eyewear is recommended.

Skin and body protection

Skin protection is not ordinarily required beyond standard work clothes.

It is good practice to wear chemical resistant gloves.

Protective measures

: Personal protective equipment (PPE) should meet recommended national 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.

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.2

Revision Date: 07/30/2015

Print Date: 07/31/2015

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

: Clear, bright liquid.

Colour

: amber

Odour

: Slight hydrocarbon

Odour Threshold

: Data not available

pΗ

: Not applicable

pour point

: -39 °C / -38 °FMethod: ASTMD97

Initial boiling point and boiling

range

: > 280 °C / 536 °Festimated value(s)

Flash point

: 224 °C / 435 °F Method: ASTM D92

Evaporation rate

: Data not available

Flammability (solid, gas)

: Data not available

Upper explosion limit

: Typical 10 %(V)

Lower explosion limit

: Typical 1 %(V)

Vapour pressure

: < 0.5 Pa (20 °C / 68 °F)

estimated value(s)

Relative vapour density

: > 1estimated value(s)

Relative density

: 0.840 (15 °C / 59 °F)

Density

840 kg/m3 (15.0 °C / 59.0 °F)

Method: ASTM D4052

Solubility(ies)

Water solubility

: negligible

Solubility in other solvents

: Data not available

Partition coefficient: n-

octanol/water

: Pow: > 6(based on information on similar products)

Auto-ignition temperature

: >

320 °C / 608 °F

Viscosity

Viscosity, dynamic

: Data not available

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.2

Revision Date: 07/30/2015

Print Date: 07/31/2015

Viscosity, kinematic

: 45 -48 mm2/s (40.0 °C / 104.0 °F)

Method: ASTM D445

Conductivity

This material is not expected to be a static accumulator.

Decomposition temperature

Data not available

SECTION 10. STABILITY AND REACTIVITY

Reactivity

: The product does not pose any further reactivity hazards in

addition to those listed in the following sub-paragraph.

Chemical stability

Stable.

Possibility of hazardous reac-

tions

: Reacts with strong oxidising agents.

Conditions to avoid

: Extremes of temperature and direct sunlight.

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

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:

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.2

Revision Date: 07/30/2015

Print Date: 07/31/2015

Skin corrosion/irritation

Product:

Remarks: Expected to be slightly irritating., Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

Serious eye damage/eye irritation

Product:

Remarks: Expected to be slightly irritating.

Respiratory or skin sensitisation

Product:

Remarks: Not expected to be a skin sensitiser.

Germ cell mutagenicity

Product:

: Remarks: Not considered a mutagenic hazard.

Carcinogenicity

Product:

Remarks: Not expected to be carcinogenic.

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed

human carcinogen by IARC.

ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcino-

gen by ACGIH.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcino-

gen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.

Reproductive toxicity

Product:

Remarks: Not expected to impair fertility., Not expected to be

a developmental toxicant.

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.2

Revision Date: 07/30/2015

Print Date: 07/31/2015

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

and the ecotoxicology of similar products.

Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).(LL/EL/IL50 expressed as the nominal amount of

product required to prepare aqueous test extract).

Ecotoxicity

Product:

Toxicity to fish (Acute toxic-

ity)

Remarks: Expected to be practically nontoxic:

LL/EL/IL50 > 100 mg/l

Toxicity to daphnia and other aquatic invertebrates (Acute

toxicity)

Remarks: Expected to be practically non toxic:

LL/EL/IL50 > 100 mg/l

Toxicity to algae (Acute toxic-

ity)

Remarks: Expected to be practically non toxic:

LL/EL/IL50 > 100 mg/l

Toxicity to fish (Chronic toxic-

Remarks: Data not available

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.2

Revision Date: 07/30/2015

Print Date: 07/31/2015

ity)

Toxicity to daphnia and other

aquatic invertebrates (Chron-

ic toxicity)

: Remarks: Data not available

: Remarks: Data not available

Toxicity to bacteria (Acute

toxicity)

Persistence and degradability

Product:

Biodegradability

: Remarks: Expected to be not readily biodegradable.

Major constituents are expected to be inherently biodegradable, but contains components that may persist in the environ-

ment.

Bioaccumulative potential

Product:

Bioaccumulation

: Remarks: Contains components with the potential to bioac-

cumulate.

Mobility in soil

Product:

Mobility

Remarks: Liquid under most environmental conditions.

If it enters soil, it will adsorb to soil particles and will not be

mobile.

Remarks: Floats on water.

Other adverse effects

no data available

Product:

Additional ecological informa-

tion

: 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, photochemi-

cal ozone creation potential or global warming potential.

Poorly soluble mixture.

May cause physical fouling of aquatic organisms.

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,

According to OSHA Hazard Communication Standard, 29 CFR

1910.1200

Version 1.2

Revision Date: 07/30/2015

Print Date: 07/31/2015

national, and local laws and regulations.

Local regulations may be more stringent than regional or na-

tional requirements and must be complied with.

Contaminated packaging

: Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Disposal should be in accordance with applicable regional,

national, and local laws and regulations.

SECTION 14. TRANSPORT INFORMATION

National Regulations

US Department of Transportation Classification (49 CFR Parts 171-180)

Not regulated as a dangerous good

International Regulation

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Pollution category

: Not applicable

Ship type

Not applicable

Product name

Not applicable

Special precautions

Not applicable

Special precautions for user

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

OSHA Hazards

: No OSHA Hazards

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

CERCLA Reportable Quantity

Shell classifies this material as an "oil" under the CERCLA Petroleum Exclusion, therefore releases to the environment are not reportable under CERCLA.

SARA 304 Extremely Hazardous Substances Reportable Quantity

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Version 1.2

Revision Date: 07/30/2015

Print Date: 07/31/2015

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

: No SARA Hazards

SARA 302

: No chemicals in this material are subject to the reporting

requirements of SARA Title III, Section 302.

SARA 313

: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Water Act

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWaterAct, Section 311, Table 117.3.

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other re-

productive harm.

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

Further information

NFPA Rating (Health, Fire, Reac- 0, 1, 0

tivity)

A vertical bar (I) in the left margin indicates an amendment from the previous version.

Abbreviations and Acronyms

The standard abbreviations and acronyms used in this document can be looked up in reference literature (e.g. scientific

dictionaries) and/or websites.

ACGIH = American Conference of Governmental Industrial

Hygienists

ADR = European Agreement concerning the International

Carriage of Dangerous Goods by Road

AICS = Australian Inventory of Chemical Substances ASTM = American Society for Testing and Materials

BEL = Biological exposure limits

BTEX = Benzene, Toluene, Ethylbenzene, Xylenes

CAS = Chemical Abstracts Service

CEFIC = European Chemical Industry Council CLP = Classification Packaging and Labelling

COC = Cleveland Open-Cup

DIN = Deutsches Institut fur Normung DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level

DSL = Canada Domestic Substance List

Version 1.2

Revision Date: 07/30/2015

Print Date: 07/31/2015

EC = European Commission

EC50 = Effective Concentration fifty

ECETOC = European Center on Ecotoxicology and Toxicology Of Chemicals

ECHA = European Chemicals Agency

EINECS = The European Inventory of Existing Commercial

Chemical Substances

EL50 = Effective Loading fifty

ENCS = Japanese Existing and New Chemical Substances

Inventory

EWC = European Waste Code

GHS = Globally Harmonised System of Classification and

Labelling of Chemicals

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association

IC50 = Inhibitory Concentration fifty

IL50 = Inhibitory Level fifty

IMDG = International Maritime Dangerous Goods

INV = Chinese Chemicals Inventory

IP346 = Institute of Petroleum test method N° 346 forthe determination of polycyclic aromatics DMSO-extractables

KECI = Korea Existing Chemicals Inventory

LC50 = Lethal Concentration fifty

LD50 = Lethal Dose fifty per cent.

LL/EL/IL = Lethal Loading/Effective Loading/Inhibitory loading

LL50 = Lethal Loading fifty

MARPOL = International Convention for the Prevention of

Pollution From Ships

NOEC/NOEL = No Observed Effect Concentration / No Ob-

served Effect Level

OE HPV = Occupational Exposure - High Production Volume

PBT = Persistent, Bioaccumulative and Toxic

PICCS = Philippine Inventory of Chemicals and Chemical

Substances

PNEC = Predicted No Effect Concentration

REACH = Registration Evaluation And Authorisation Of

Chemicals

RID = Regulations Relating to International Carriage of Dan-

gerous Goods by Rail

SKIN_DES = Skin Designation

STEL = Short term exposure limit

TRA = Targeted Risk Assessment

TSCA = US Toxic Substances Control Act

TWA = Time-Weighted Average

vPvB = very Persistent and very Bioaccumulative

Revision Date

: 07/30/2015

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.