according to the Hazardous Products Regulations

# Shell Corena S4 R 46

Version Revision Date: SDS Number: Print Date: 2025-06-14

3.2 2025-06-13 800001005118 Date of last issue: 10.04.2025

Date of first issue: 09.12.2011

### **SECTION 1. IDENTIFICATION**

: Shell Corena S4 R 46 Product name

Product code : 001D7786

### Manufacturer or supplier's details

Manufacturer/Supplier **Shell Canada Products** 

> 4000-500 Centre Street SE Calgary AB T2G 1A6

Canada

Telephone (+1) 8006611600 Telefax (+1) 4033848345

Emergency telephone num-

CHEMTREC (24 hr): 1 (703) 527-3887 or 1 (800) 424-9300

(US)

### Recommended use of the chemical and restrictions on use

Recommended use : Compressor oil.

Restrictions on use

This product must not be used in applications other than those

listed in Section 1 without first seeking the advice of the sup-

plier.

# **SECTION 2. HAZARDS IDENTIFICATION**

### GHS classification in accordance with the Hazardous Products Regulations

Reproductive toxicity : Category 2

**GHS** label elements

Hazard pictograms



Signal word Warning

Hazard statements PHYSICAL HAZARDS:

Not classified as a physical hazard under GHS criteria.

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**HEALTH HAZARDS:** 

H361f Suspected of damaging fertility. ENVIRONMENTAL HAZARDS:

Not classified as an environmental hazard under GHS criteria.

Precautionary statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

and understood.

P280 Wear protective gloves/ protective clothing/ eye protection/

face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/

attention.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste dis-

posal plant.

Hazardous components which must be listed on the label:

Contains alkaryl amine.

### 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 / Mixture : Mixture

Chemical nature : Blend of polyolefins and additives.

### Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Alkaryl amine	Benzenamine, N-phenyl-, reac- tion products with 2,4,4- trimethylpen- tene	68411-46-1	1 - 2.9 *
Dialkyl dithiophosphate ester	Propanoic acid, 3-[[bis(2- methylpropoxy)	268567-32-4	0.1 - 0.9 *

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	phosphinothi- oyl]thio]-2- methyl-			
(4-nonylphenoxy)acetic	(4-	3115-49-9		
acid	nonylphe-		0.01 - 0.099 *	
	noxy)acetic acid			

<sup>\*</sup> Actual concentration or concentration range is withheld as a trade secret

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

If inhaled : No treatment necessary under normal conditions of use.

If symptoms persist, obtain medical advice.

In case of skin contact : Remove contaminated clothing. Flush exposed area with wa-

ter and follow by washing with soap if available.

If persistent irritation occurs, obtain medical attention.

In case of eye contact : Flush eye with copious quantities of water.

Remove contact lenses, if present and easy to do. Continue

rinsing.

If persistent irritation occurs, obtain medical attention.

If swallowed : In general no treatment is necessary unless large quantities

are swallowed, however, get medical advice.

Most important symptoms and effects, both acute and

delayed

Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.

Protection of first-aiders : When administering first aid, ensure that you are wearing the

appropriate personal protective equipment according to the

incident, injury and surroundings.

Notes to physician : Treat symptomatically.

### **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.

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Specific extinguishing meth-

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: Avoid contact with skin and eyes.

tive equipment and emer-

gency procedures

Use appropriate containment to prevent uncontrolled release. Environmental precautions

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 Section 8 of this Safety Data Sheet.

For guidance on disposal of spilled material see Section 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 risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this

material.

according to the Hazardous Products Regulations

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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 : Proper grounding and bonding procedures should be used

during all bulk transfer operations to avoid static accumulation.

Further information on stor-

age stability

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.

### **SECTION 8. EXPOSURE CONTROLS/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.

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:

according to the Hazardous Products Regulations

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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 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 and particles [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

according to the Hazardous Products Regulations

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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 protection is not ordinarily required beyond standard Skin and body protection

work clothes.

It is good practice to wear chemical resistant gloves.

Protective measures Personal protective equipment (PPE) should meet recom-

mended 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 Section 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.

### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

### 9.1 Information on basic physical and chemical properties

Physical state Liquid at room temperature.

Colour light brown

Odour Data not available

according to the Hazardous Products Regulations

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Odour Threshold : Data not available

Pour point : -48 °C

Method: ASTM D97

-45 °C

Method: ISO 3016

Melting / freezing point Data not available

Initial boiling point and boiling :

range

> 280 °C

estimated value(s)

Flammability (solid, gas) : Not applicable

Flammability (liquids) : Not classified as flammable but will burn.

Upper explosion limit / Upper

flammability limit

Typical 10 %(V)

Lower explosion limit / Lower :

flammability limit

Typical 1 %(V)

Flash point : 230 °C

Method: ISO 2592

Auto-ignition temperature : > 320 °C

Decomposition temperature : Data not available

pH : Not applicable

Viscosity

Viscosity, dynamic : Data not available

Viscosity, kinematic : 46 mm2/s (40.0 °C)

Method: ISO 3104

7.7 mm2/s (100 °C) Method: ISO 3104

according to the Hazardous Products Regulations

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46 mm2/s (40.0 °C) Method: ASTM D445

7.5 mm2/s (100 °C) Method: ASTM D445

Solubility(ies)

Water solubility : negligible

Solubility in other solvents : Data not available

Partition coefficient: n-

octanol/water

: log Pow: > 6

(based on information on similar products)

Vapour pressure : < 0.5 Pa (20 °C)

estimated value(s)

Relative density : 0.843 (15 °C)

Density : 843 kg/m3 (15.0 °C)

Method: ISO 12185

843 kg/m3 (15.0 °C) Method: ASTM D1298

Relative vapour density : > 5

Particle characteristics

Particle size : Data not available

9.2 Other information

Explosives : Classification Code: Not classified

Oxidizing properties : Data not available

Evaporation rate : Data not available

Conductivity : This material is not expected to be a static accumulator.

according to the Hazardous Products Regulations

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### **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

No decomposition if stored and applied as directed.

#### **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 com-

ponent(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: Low toxicity

Based on available data, the classification criteria are not met.

Acute inhalation toxicity : Remarks: Based on available data, the classification criteria

are not met.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Remarks: Low toxicity

Based on available data, the classification criteria are not met.

### Skin corrosion/irritation

**Product:** 

Remarks : Slightly irritating to skin.

Prolonged or repeated skin contact without proper cleaning

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can clog the pores of the skin resulting in disorders such as oil

acne/folliculitis.

Based on available data, the classification criteria are not met.

### Serious eye damage/eye irritation

**Product:** 

Remarks : Slightly irritating to the eye.

Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

**Product:** 

Remarks : Not a skin sensitiser.

Based on available data, the classification criteria are not met.

**Components:** 

Dialkyl dithiophosphate ester:

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

Remarks : Classified Skin Sensitiser Category 1B.

(4-nonylphenoxy)acetic acid:

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

Germ cell mutagenicity

**Product:** 

Genotoxicity in vivo : Remarks: Non mutagenic

Based on available data, the classification criteria are not met.

Carcinogenicity

**Product:** 

Remarks : Not a carcinogen.

Based on available data, the classification criteria are not met.

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.

**OSHA**No component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

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

Remarks : Suspected of damaging fertility.

according to the Hazardous Products Regulations

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STOT - single exposure

**Product:** 

Remarks : Based on available data, the classification criteria are not met.

STOT - repeated exposure

**Product:** 

Remarks : Based on available data, the classification criteria are not met.

**Aspiration toxicity** 

**Product:** 

Not an aspiration hazard.

**Further information** 

**Product:** 

Remarks : Used oils may contain harmful impurities that have accumu-

lated 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 representative of the product as a whole, rather than for

individual component(s).

**Ecotoxicity** 

**Product:** 

Toxicity to fish : Remarks: LL/EL/IL50 > 100 mg/l

Practically non toxic:

Based on available data, the classification criteria are not met.

Toxicity to daphnia and other :

aquatic invertebrates

Remarks: LL/EL/IL50 > 100 mg/l

Practically non toxic:

Based on available data, the classification criteria are not met.

Toxicity to algae/aquatic

according to the Hazardous Products Regulations

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plants Remarks: LL/EL/IL50 > 100 mg/l

Practically non toxic:

Based on available data, the classification criteria are not met.

Toxicity to fish (Chronic tox-

icity)

Remarks: Based on available data, the classification criteria

are not met.

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

Remarks: Based on available data, the classification criteria

are not met.

Toxicity to microorganisms : Remarks: Based on available data, the classification criteria

are not met.

### **Components:**

(4-nonylphenoxy)acetic acid:

M-Factor (Acute aquatic tox-

icity)

1

### Persistence and degradability

**Product:** 

Biodegradability : Remarks: Not readily biodegradable.

Major constituents are inherently biodegradable, but contains

components that may persist in the environment.

### **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

**Product:** 

Additional ecological infor-

mation

: Does not have ozone depletion potential, photochemical ozone creation potential or global warming potential.

Product is a mixture of non-volatile components, which will not be released to air in any significant quantities under normal

conditions of use.

according to the Hazardous Products Regulations

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Poorly soluble mixture.

Causes physical fouling of aquatic organisms.

### **SECTION 13. DISPOSAL CONSIDERATIONS**

### **Disposal methods**

Waste from residues

Recover or recycle if possible.

It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal meth-

ods in compliance with applicable regulations.

Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Do not dispose into the environment, in drains or in water

courses.

Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater

contamination.

Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.

MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.

Contaminated packaging

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

Local legislation

Remarks

: Disposal should be in accordance with applicable regional,

national, and local laws and regulations.

### **SECTION 14. TRANSPORT INFORMATION**

### **National Regulations**

Not regulated as a dangerous good

### International Regulations

#### IATA-DGR

Not regulated as a dangerous good

according to the Hazardous Products Regulations

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#### **IMDG-Code**

Not regulated as a dangerous good

### Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

### Special precautions for user

Remarks : Special Precautions: Refer to Section 7, Handling & Storage,

for special precautions which a user needs to be aware of or

needs to comply with in connection with transport.

#### **SECTION 15. REGULATORY INFORMATION**

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

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

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:

TSCA : All components listed.

DSL : All components listed.

### **SECTION 16. OTHER INFORMATION**

#### Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; 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; 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

according to the Hazardous Products Regulations

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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; TECI - Thailand Existing Chemicals Inventory; 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.

Sources of key data used to compile the Safety Data

Sheet

The quoted data are from, but not limited to, one or more sources of information (e.g. toxicological data from Shell Health Services, material suppliers' data, CONCAWE, EU

IUCLID date base, EC 1272 regulation, etc).

Revision Date : 2025-06-13 Date format : mm/dd/yyyy

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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