

According to Work Health and Safety Regulations 2011 and National Model Code of Practice for the preparation of Safety Data Sheets for Hazardous Chemicals

Version 1.1

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SDS Record Number: CSSS-TCO-010-132695

### 1. Identification of the material and supplier

**Material name:** Synthetic Heavy-Duty Industrial Gear Oil 4406 VG460  
**Product Code** 60111816  
**Other means of identification:** -  
**Recommended use:** Lubrication of various light, medium and heavy duty gearboxes  
**Restrictions on use:** -  
**Manufacturer:**  
**Supplier(Manufacturer):** SINOPEC LUBRICANT CO.,LTD  
**Address:** No. 6 Anning Zhuang West Road, Haidian District, Beijing, P.R.China  
**Contact person(E-mail):** csc.lube@sinopec.com  
**Telephone:** 86-800-810-9886  
**Fax:** 86-10-82410856  
**Emergency number:** 86-800-810-9886

**Australia Supplier(Manufacturer):** International Lubricant Distributors Pty. Ltd.  
**Address:** 21 Logistics Boulevard, Kenwick, WA 6107, Australia  
**Contact person(E-mail):** -  
**Telephone:** -  
**Fax:** +61 8 9381 1788  
**Emergency number:** 1300 558 939

**New Zealand Supplier(Manufacturer):** MTS ENERGY LTD  
**Address:** PO BOX 302-133 North Harbour, Auckland 0751, New Zealand  
**Telephone:** +64 9 480 8921  
**Fax:** +64 9 480 8398  
**Emergency number:** 0800 399 993 (24 Hrs)

### 2. Hazards identification

**Australia:**

Not classified as Hazardous according to criteria of National Occupational Health and Safety Commission (NOHSC), Australia.

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

**New Zealand:**

Not classified as Hazardous according to the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001, New Zealand.

Not classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433:2012 Transport of Dangerous Goods on Land.

**GHS label elements:**

**Hazard Pictograms :** No hazard pictogram is used.

**Signal word:** No signal word is used.

<b>Hazard statement:</b>	Not applicable.
<b>Precautionary statement:</b>	
<b>Prevention:</b>	Not applicable.
<b>Response:</b>	Not applicable.
<b>Storage:</b>	Not applicable.
<b>Disposal:</b>	Not applicable.
<b>Other hazards which do not result in classification:</b>	Not applicable.

### 3. Composition/information on ingredients

Components	CAS No.	Percent
PAG	Mixture	90.0-99.0%
Additive	Mixture	1.0-10.0%

### 4. First aid measures

<b>Inhalation:</b>	Get medical attention if have symptoms such as cough.
<b>Skin:</b>	Remove contaminated clothing and wash with soap and water. Get medical attention if necessary.
<b>Eye:</b>	Flush with water for 15 minutes. Get medical attention if necessary.
<b>Ingestion:</b>	Get medical attention if swallowed in large quantities.
<b>Symptoms caused by exposure:</b>	Not available.
<b>Medical Attention and Special Treatment:</b>	Treat symptomatically.

### 5. Fire-fighting measures

<b>Suitable extinguishing media:</b>	Sprinkler or spray, foam extinguisher, carbon dioxide extinguisher, dry powder extinguisher. Sand for small fires only.
<b>Extinguishing media which must not be used for safety reasons:</b>	Spray water.
<b>Specific hazards arising from the chemical:</b>	Highly dependent on combustion conditions. Incomplete combustion produces smoke, carbon monoxide, carbon dioxide, sulfur oxides, aldehydes, nitrogen oxides, phosphates, some metal oxides and other decomposition components.
<b>Special protective equipment and precautions for fire fighters:</b>	This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures:</b>	Avoid build up of vapor. Ensure sufficient supply of air. Avoid contact with eyes or skin. Contact with water - danger of sliding. Wear appropriate personal protective equipment and clothing to prevent exposure. Increase ventilation. Evacuate all unprotected personnel. Eliminate all sources of ignition in vicinity of spilled material.
<b>Environmental precautions:</b>	Do not allow material to be released to the environment without proper governmental permits.
<b>Methods and materials for containment and cleaning up:</b>	In case of a large amount of leakage, vacuum pump used to pump it into the container. In case of a small amount of leakage, sawdust, soil, oil absorbent cotton or other adsorbents

used to prevent the diffusion and put it into the sealed container for treatment. In case of land leakage, protective measures taken to cut off the pollution source and minimize the pollution to the surface water. In case of water leakage, immediately stop the lost oil with oil blocking rope, warn the adjacent ships, and use appropriate dispersant if necessary.

## 7. Handling and storage

### Precautions for safe handling:

Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures.

### Conditions for safe storage, including any incompatibilities:

Do not store in open or unlabeled containers. Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

### Storage regulation

Keep containers sealed and do not store in open or unlabeled containers. Storage conditions shall be cool, dry and ventilated, away from strong oxidants, kindling, heat sources and inflammables. Store at room temperature. Some products may remain in the empty container. Do not cut, weld or expose to high temperature and flame.

## 8. Exposure controls/personal protection

### Control parameters – exposure standards, biological monitoring:

Not available

### Exposure Levels

### Occupational exposure limits:

#### Australia. National Workplace OELs (Workplace Exposure Standards for Airborne Contaminants, Appendix A)

Components	Type	Value	Form
Not available.	Not available.	Not available.	Not available.

#### Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

Components	Type	Value	Form
Not available.	Not available.	Not available.	Not available.

No exposure standards have been established for this material.

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

### Appropriate engineering controls:

Provide sufficient ventilation to keep airborne levels as low as possible. Where vapours or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate, a local exhaust ventilation system is required.

### Personal protective equipment:

#### Eye/face protection:

No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

#### Skin protection:

No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace.

#### Respiratory protection:

No respiratory protection is normally required. 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 user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge. Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

**Hand protection:**

Suggested materials for protective gloves include: Neoprene, Nitrile Rubber.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

**Appearance:**

<b>Physical state:</b>	Fluid
<b>Form:</b>	Fluid
<b>Color:</b>	Yellow to brown clear
<b>Odor:</b>	Slightly ether taste
<b>Odour threshold:</b>	Not available
<b>PH:</b>	Not available
<b>Melting point/Freezing point:</b>	Not available
<b>Boiling point and boiling range:</b>	Not available
<b>Flash point:</b>	200°C (open) (typical value )
<b>Evaporation rate:</b>	Not available
<b>Flammability (solid, gas) :</b>	Not available
<b>Upper/lower flammability or explosive limits:</b>	Not available
<b>Vapor pressure:</b>	Not available
<b>Vapor density:</b>	Not available
<b>Density:</b>	0.97-1.03 kg/l @20°C (68°F)
<b>Solubility :</b>	Soluble in water
<b>Partition coefficient (n-octanol/water) :</b>	Not available
<b>Auto-ignition temperature:</b>	Not available
<b>Decomposition temperature:</b>	Not available
<b>Viscosity, dynamic:</b>	414-506 mm <sup>2</sup> /s @ 40°C (104°F) (typical value )
<b>Specific heat value:</b>	Not available
<b>Particle size:</b>	Not available
<b>Volatile organic compounds content:</b>	Not available
<b>% volatile:</b>	Not available
<b>Saturated vapour concentration:</b>	Not available
<b>Release of invisible flammable vapours and gases:</b>	Not available
<b>Additional parameters</b>	
<b>Shape and aspect ratio:</b>	Not available
<b>Crystallinity:</b>	Not available
<b>Dustiness:</b>	Not available
<b>Surface area:</b>	Not available
<b>Degree of aggregation or agglomeration:</b>	Not available
<b>Ionisation (redox potential):</b>	Not available

**Biodurability or biopersistence:** Not available  
**Pour Point:** -35°C (typical value)

## 10. Stability and reactivity

**Reactivity:** Stable under recommended transport or storage conditions.  
**Chemical stability:** Stable under normal temperatures and pressures.  
**Possibility of hazardous reactions:** Contact with strong oxidants.  
**Conditions to avoid:** Incompatible materials. Extreme temperature, sunlight exposure, contact with strong oxidant and fire source.  
**Incompatible materials:** May react with strong oxidizing agents, such as peroxides, etc.  
**Hazardous decomposition products:** Incomplete combustion produces smoke, carbon monoxide, carbon dioxide, sulfur oxides, aldehydes, nitrogen oxides, phosphates, some metal oxides and other decomposition components.

## 11. Toxicological information

**Toxicological data:**

**Acute toxicity:**

**LD50(Oral, Rat):** Not available  
**LD50(Dermal, Rabbit):** Not available  
**LC50(Inhalation, Rat):** Not available

**Skin corrosion/Irritation:** No data available.  
**Serious eye damage/irritation:** No data available.  
**Respiratory or skin sensitization:** No data available.  
**Germ cell mutagenicity:** No data available.  
**Carcinogenicity:** No data available.  
**Reproductive toxicity:** No data available.  
**STOT- single exposure:** No data available.  
**STOT-repeated exposure:** No data available.  
**Aspiration hazard:** No data available.  
**Other information** This product has no known adverse effect on human health.  
**Information on routes of exposure** No data available.  
**Symptoms related to exposure** No data available.  
**Numerical measures of toxicity** No data available.  
**Immediate, delayed and chronic health effects from exposure** No data available.

## 12. Ecological information

### Ecotoxicity:

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LL50	N/A	96h	Fish	OECD 203	N/A	N/A
EC50	N/A	48h	Daphnia	OECD 202	N/A	N/A
EC50	N/A	72h	Algae	OECD 201	N/A	N/A

**Persistence and degradability:** Expected biodegradation.  
**Bioaccumulative potential:** No potential component with bioaccumulation.

**Mobility in soil:**

Be absorbed by soil particles and cannot flow.

**Other adverse effects:**

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Safe handling and disposal methods:**

Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

**Disposal of any contaminated packaging:****Australia:**

The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations.

**New Zealand:****Product Disposal**

Product wastes are controlled wastes and should be disposed of in accordance with all applicable local and national regulations. This product can be disposed through a licensed commercial waste collection service. In this specific case the product is a combustible substance and therefore can be sent to an approved high temperature incineration plant for disposal. Personal protective clothing and equipment as specified in Section 8 of this SDS must be worn during handling and disposal of this product. The ventilation requirements as specified in the same section must be followed, and the precautions given in Section 7 of this SDS regarding handling must also be followed. Do not dispose into the sewerage system. Do not discharge into drains or watercourses or dispose where ground or surface waters may be affected. In New Zealand, the disposal agency or contractor must comply with the New Zealand Hazardous Substances (Disposal) Regulations 2001. Further details regarding disposal can be obtained on the EPA New Zealand website under specific group standards.

**Container Disposal**

The container or packaging must be cleaned and rendered incapable of holding any substance. It can then be disposed of in a manner consistent with that of the substance it contained. In this instance the packaging can be disposed through a commercial waste collection service. Alternatively, the container or packaging can be recycled if the hazardous residues have been thoroughly cleaned or rendered non-hazardous. In New Zealand, the packaging (that may or may not hold any residual substance) that is lawfully disposed of by householders or other consumers through a public or commercial waste collection service is a means of compliance with regulations.

## 14. Transport information

**Australia:**

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

**New Zealand:**

Not classified as Dangerous Goods for transport according to the NZS 5433:2012 Transport of Dangerous Goods on Land.

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

**U.N. Number**

None Allocated

**Proper Shipping Name**

None Allocated

**DG Class**

None Allocated

**Packing Group**

None Allocated

## 15. Regulatory information

### Safety, health and environmental regulations specific for the product in question

**Australia:**

Not classified as Hazardous according to criteria of National Occupational Health and Safety Commission (NOHSC), Australia.

Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

**New Zealand:**

Not classified as Hazardous according to the New Zealand Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.

**Australia HVIC: Listed substance**

Not available.

**New Zealand Location Test Certificate**

Subject to Regulation 55 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations a location test certificate is required when quantity greater than or equal to those indicated below are present.

Hazard Class	Quantity beyond which controls apply for closed containers	Quantity beyond which controls apply when use occurring in open containers
Not Applicable	Not Applicable	Not Applicable

**New Zealand Approved Handler**

Subject to Regulation 56 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations, the substance must be under the personal control of an Approved Handler when present in a quantity greater than or equal to those indicated below.

Class of substance	Quantities
Not Applicable	Not Applicable

**Inventory status:**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Not available.
Canada	Domestic Substances List (DSL)	Not available.
Canada	Non-Domestic Substances List (NDSL)	Not available.
China	Inventory of Existing Chemical Substances in China (IECSC)	Not available.
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Not available.
Europe	European List of Notified Chemical Substances (ELINCS)	Not available.
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Not available.
Korea	Existing Chemicals List (ECL)	Not available.
New Zealand	New Zealand Inventory	Not available.
Philippines	Philippine Inventory of Chemicals and Chemical	Not available.

## Substances (PICCS)

United States & Puerto Rico

Toxic Substances Control Act (TSCA) Inventory

Not available.

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information

**Indication of changes:** Version 1.1

**Date of preparation or review:** 2022.05.23

**Key abbreviations or acronyms** CAS: Chemical Abstracts Service

**used:** LC50: Lethal Concentration 50

EC50: Concentration for 50% of maximal effect

LD50: Lethal dose 50%

MAC: maximum allowable concentration, (MAC)

PC-TWA: permissible concentration-time weighted average

PC-STEL: permissible concentration-short term exposure limit

### reference

#### **Australia:**

Standard for the Uniform Scheduling of Medicines and Poisons.

Approved criteria for classifying hazardous substances [NOHSC: 1008(2004)].

National Code of Practice for the Preparation of Material Safety Data Sheets [NOHSC: 2011(2003)].

Australian Code for the Transport of Dangerous Goods by Road & Rail.

Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Workplace exposure standards for airborne contaminants, Safe work Australia.

American Conference of Industrial Hygienists (ACGIH)

#### **New Zealand:**

Workplace Exposure Standards and Biological Exposure Indices

Transport of Dangerous goods on land NZS 5433.

Preparation of Safety Data Sheets - Approved Code of Practice Under the HSNO Act 1996 (HSNO CoP 8-1 0906).

Assigning a hazardous substance to a group standard.

American Conference of Industrial Hygienists (ACGIH)