Safety Data Sheet



SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Cetus DE 100

Product Use: Compressor Oil
Product Number(s): 219400, 540533
Company Identification

Chevron Singapore Pte Ltd 3 Fraser Street #12-28 DUO Tower Singapore 189352

Transportation Emergency Response

Singapore Civil Defense Force: 995

Health Emergency

(800) 231-0623 or (510) 231-0623

Product Information

Product Information: +65-6318-1000 SDS Requests: +65-6318-1000

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION:

Not classified as hazardous according to Singapore Standard SS 586: 2014.

HAZARDS OTHERWISE NOT CLASSIFIED: Not applicable.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

This material contains no ingredients requiring disclosure under the regulatory criteria for this jurisdiction.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs

Note to Physicians: In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of

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the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Unusual Fire Hazards: Leaks/ruptures in high pressure system using materials of this type can create a fire hazard when in the vicinity of ignition sources (eg. open flame, pilot lights, sparks, or electric arcs).

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. **Combustion Products:** Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion. Combustion may form oxides of: Phosphorus, Sulfur.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

Static Hazard: 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.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the workplace when designing engineering controls and selecting personal protective equipment (PPE). If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, refer to PPE information below.

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Factors that affect PPE include, but are not limited to: properties of the chemical, other chemicals which may contact the same PPE, physical requirements (fit & sizing, cut/puncture protection, dexterity, thermal protection, etc.), and potential allergic reactions to the PPE material. It is the responsibility of the user to read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances. Refer to appropriate CEN standards. Special note: Do not use in breathing air apparatus or medical equipment.

ENGINEERING CONTROLS:

Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: Wear protective equipment to prevent eye contact. Selection of protective equipment may include safety glasses, chemical goggles, face shields, or a combination depending on the work operations conducted.

Skin Protection: Wear chemical personal protective equipment (PPE) to prevent skin contact. Selection of chemical protective clothing should be performed by an Occupational Hygienist or Safety Professional and be based upon applicable standards (ASTM F739 or EN 374). Using chemical PPE depends upon operations conducted and may include chemical gloves, boots, chemical apron, chemical suit, and complete facial protection. Refer to PPE manufacturers to obtain breakthrough time information to determine how long PPE can be used before it needs to be replaced. Unless specific glove manufacturer data indicates otherwise, the below table is based upon available industry data to assist in the glove selection process and is intended to be used as reference only.

Chemical Glove Material	Thickness (mm)	Typical Breakthrough Time (minutes)
Butyl	0.7	120
Nitrile	0.8	240
Viton Butyl	0.3	240

Respiratory Protection: No respiratory protection is normally required. 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.

Occupational Exposure Limits: No applicable occupational exposure limits exist for this material or its components. Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Brown to yellow
Physical State: Viscous liquid
Odor: Hydrocarbon odor

Odor Threshold: No data available

pH: Not Applicable

Vapor Pressure: No data available

Vapor Density (Air = 1): No data available

Boiling Point: No data available
Solubility: Insoluble in water.
Freezing Point: Not Applicable
Melting Point: No data available

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Density: 0.962 g/cm3 @ 15°C (59°F) (Typical) **Viscosity:** 90 mm2/s @ 40°C (104°F) (Minimum)

Evaporation Rate: No data available

Octanol/Water Partition Coefficient: No data available

FLAMMABLE PROPERTIES:

Flashpoint: (Cleveland Open Cup) 232 °C (450 °F) (Minimum)

Autoignition: No data available

Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not

Applicable

SECTION 10 STABILITY AND REACTIVITY

Reactivity: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides,

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Incompatibility With Other Materials: Not applicable

Hazardous Decomposition Products: None known (None expected) **Hazardous Polymerization:** Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Eye Irritation: The material is not considered an eye irritant. The product has not been tested. The statement is based on evaluation of data for product components.

Skin: High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.

Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.

Acute Dermal Toxicity: The material is not considered a dermal toxicant. The product has not been tested. The statement is based on evaluation of data for product components.

Skin Irritation: The material is not considered a skin irritant. The product has not been tested. The statement is based on evaluation of data for product components.

Skin Sensitization: The material is not considered a skin sensitizer. The product has not been tested. The statement is based on evaluation of data for product components.

Ingestion: Not expected to be harmful if swallowed.

Acute Oral Toxicity: The material is not considered an oral toxicant. The product has not been tested. The statement is based on evaluation of data for product components.

Inhalation: Not expected to be harmful if inhaled. Contains a synthetic hydrocarbon oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

Acute Inhalation Toxicity: The material is not considered an inhalation toxicant. The product has not been tested. The statement is based on evaluation of data for product components.

Acute Toxicity Estimate: Not Determined

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SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

This material is not expected to be harmful to aquatic organisms.

The product has not been tested. The statement has been derived from the properties of the individual components.

MOBILITY

No data available.

PERSISTENCE AND DEGRADABILITY

This material is expected to be readily biodegradable. The product has not been tested. The statement has been derived from the properties of the individual components.

POTENTIAL TO BIOACCUMULATE

Bioconcentration Factor: No data available.

Octanol/Water Partition Coefficient: No data available

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

UN Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE UNITED NATIONS MODEL REGULATIONS/RECOMMENDATIONS

IMO/IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: Not applicable

SECTION 15 REGULATORY INFORMATION

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1 01-2A=IARC Group 2A 01-2B=IARC Group 2B

No components of this material were found on the regulatory lists above.

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AllC (Australia), DSL (Canada), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines), TCSI (Taiwan), TSCA

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(United States).

SECTION 16 OTHER INFORMATION

REVISION STATEMENT: SECTION 04 - Delayed Health Effects - Target Organ(s) information was modified.

SECTION 08 - Eye/Face Protection information was modified.

SECTION 08 - General Considerations information was modified.

SECTION 08 - Personal Protective Equipment List information was deleted.

SECTION 08 - Personal Protective Equipment information was added.

SECTION 08 - Skin Protection information was modified.

SECTION 11 - Toxicological Information information was modified.

SECTION 12 - Ecological Information information was deleted.

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ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA -	Time Weighted Average
STEL - Short-term Exposure Limit	PEL -	Permissible Exposure Limit
	CAS -	Chemical Abstract Service Number
ACGIH - American Conference of	IMO/IMDG	- International Maritime Dangerous
Governmental Industrial Hygienists	Goods Code	-
API - American Petroleum Institute	MSDS -	Material Safety Data Sheet
CVX - Chevron	NFPA -	National Fire Protection Association
	(USA)	
DOT - Department of Transportation (USA)	NTP -	National Toxicology Program (USA)
IARC - International Agency for Research on	OSHA	- Occupational Safety and Health
Cancer	Administration	·

Prepared according to the Singapore Standard SS 586: 2014

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

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