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|--|--|------|-------|------|------|------|--|---|---------|
| OWNER:  شرکت سست و سویی توسعه ایرانپترو (سهامی خاص) | BUSHEHR PETROCHEMICAL COMPANY MEG PLANT | | | | | | EPC CONTRACTOR:  Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT | | |
| | LUBRICANT LIST AND MATERIAL SAFETY DATA SHEET | | | | | |  | | |
| MC : | | | | | | |  شرکت سست و سویی توسعه ایرانپترو (سهامی خاص) |  شرکت سست و سویی توسعه ایرانپترو (سهامی خاص) | |
| Owner Document Number: 17811-51 | Project | Area | Phase | Unit | Dis. | Doc. | Seq. | Rev.: | Page |
| | BU | 20 | VD | 303 | ME | LST | 0025 | 00 | 1 of 20 |

LUBRICANT LIST AND MATERIAL SAFETY DATA SHEET

| | | |
|--|---|---|
|  شرکت سست و سویی توسعه ایرانپترو |  Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT | BUSHEHR PETROCHEMICAL COMPANY MEG PLANT |
| Document Review | | |
| Issue Purpose: | IFA | |
| Result Code: AP,AN,CM,RE,NC | CM | |
| Next Status : IFC,IFA,IFI,AFC,AB | IFA | |
| Responsible Department | MECHANICAL | |
| Commented Date | Sep/23/2021 | |
| Approval or review hereunder shall not be construed to relieve Vendor / Subcontractor of his responsibilities and liability under the contract. | | |

| | | | | | | |
|------|------------|------------------|----------|---------|----------|----------|
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| | | | | | | |
| 00 | 14/09/2021 | For approval | KP | PW | JR | |
| Rev. | Date | Purpose of Issue | Prepared | Checked | Approved | AC Code |
| | | | | | Class: 1 | Phase: P |



Following items shall be added to lubricant list
 1- Lubricant spec. (ISOVG)
 2- DIN classification of grease shall be specified (DIN 51502 or etc.).
 3- Refilling (INTERVAL and QUANTITY)
 4- Replace (INTERVAL and QUANTITY)
 5- Lubricated part (Bearing and etc.)
 6- Three recommended well known brand
 7- If compressor is equipped with self lubricated bearing, life time of bearing shall be specified
 8- Pour point
 9- Kinematic viscosity (100 ° C)

Lubrication List



| Project : MEG PLANT | | COMPANY | | | INITIAL CHARGE | VENDOR NAME. Airpack Netherlands BV |
|--------------------------------------|------------------------|----------------|-------------------------|--------------------|--|---|
| | | | | | ITEM NAME. Instrument Air Compressor Package | |
| | | | | | REV. NO. 00 | |
| | | | | | DATE. 11/08/2021 | |
| LUBRICATION SCHEDULE | | | | | | |
| NO. | Tag No. | Description | Type | Quantity Liters | Remarks | |
| A : Oil | | | | | | |
| 1 | 20-C-1002 | Compressor | Summit PS 300 (Recip M) | 7 L | MSDS Attachment 1 | |
| 2 | 20-C-2080 | Compressor | Summit PS 300 (Recip M) | 13,5 L | MSDS Attachment 1 | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| B : Grease | | | | | | |
| 1 | 20-C-1002-M | Main motor | Mobil Polyrex EM | 13 g | MSDS Attachment 2 | |
| 2 | 20-C-2080-M | Main motor | Mobil Polyrex EM | 27 g | MSDS Attachment 2 | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |

Please check the quantity again.
 C-1002 is 55 kW and C-7080 is 15kW

7080

7 L
13,5 L

7080



SAFETY DATA SHEET

Issue Date 12-Jul-2018

Revision Date 12-Jul-2018

Version 3

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name PS-300

Other means of identification

Product code: 050055

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Lubricant.

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address

Klüber Lubrication NA LP
9010 County Road 2120
Tyler, Texas 75707
Phone: (903) 534-8021
Fax: (903) 581-4376

Emergency telephone number

Emergency Telephone CHEMTREC: 1-800-424-9300; INTERNATIONAL: (703) 527-3887

2. HAZARD IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

WHMIS 2015 Regulatory Status

This chemical is not considered hazardous by the Canadian Hazardous Products Regulations (WHMIS 2015).

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label Elements

EMERGENCY OVERVIEW

Signal word

Not Classified

Hazard statements

None

The product contains no substances which at their given concentration, are considered to be hazardous to health

| | | |
|---|------------------------------|------------------|
| Appearance Oil | Physical state Liquid | Odor Mild |
| Eyes None | | |
| Skin None | | |
| Inhalation None | | |
| Ingestion None | | |
| Hazards not otherwise classified (HNOC) | | |
| Other information | | |
| • Harmful to aquatic life with long lasting effects | | |
| Unknown Acute Toxicity | | |
| 0% of the mixture consists of ingredient(s) of unknown toxicity | | |

3. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains no substances which at their given concentration, are considered to be hazardous to health.

| Components | CAS-No | Weight % | Trade Secret |
|---|------------|----------|--------------|
| 1,2 Benzenedicarboxylic acid di-c9-c11 branched alkyl ester | 68515-49-1 | 5 - 10% | * |

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

| | |
|----------------------|---|
| Eye contact: | Flush eye with water for 15 minutes. If symptoms persist, call a physician. |
| Skin contact: | Wash off immediately with soap and plenty of water. |
| Inhalation: | In the case of inhalation of aerosol/mist consult a physician if necessary. Move to fresh air. |
| Ingestion: | Do not induce vomiting without medical advice. Drink 1 or 2 glasses of water. Consult a physician if necessary. |

Most important symptoms and effects, both acute and delayed

Symptoms: No information available.

Indication of any immediate medical attention and special treatment needed

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Carbon dioxide (CO₂). Dry chemical. Water spray mist or foam.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire, cool tanks with water spray.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Special protective equipment for firefighters:

In the event of fire, wear self-contained breathing apparatus. Standard procedure for chemical fires.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions: Contaminated surfaces will be extremely slippery. Use personal protective equipment. Remove all sources of ignition.

Environmental precautions

Environmental precautions: Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up: Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Always replace cap after use. Handle in accordance with good industrial hygiene and safety practice. Spilling onto the container's outside will make container slippery. Avoid contact with eyes and skin.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers dry and tightly closed to avoid moisture absorption and contamination

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines Contains mineral oil, vegetable oil, and/or synthetic oil. Under conditions which may generate mists, observe the OSHA PEL of 5 mg/m³, ACGIH STEL of 10 mg/m³.

Appropriate engineering controls

Engineering measures to reduce exposure: Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Respiratory protection: In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

Hand protection: Nitrile rubber

Eye protection: Safety glasses

Skin and body protection: Usual safety precautions while handling the product will provide adequate protection against this potential effect

General Hygiene Considerations Avoid contact with skin, eyes and clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid
Appearance Oil **Odor** Mild **Color** Clear **Odor threshold** No information available

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> | | |
|-------------------------------------|---------------------------|--------------------------|--------------------------------------|--------------------------|
| Melting point/freezing point | No information available | | pH | Not applicable |
| Flash point | > 204 °C / 400 °F | Cleveland Open Cup | Boiling point / boiling range | No information available |
| Flammability (solid, gas) | No information available | | Evaporation rate | No information available |
| Upper flammability limit: | No information available | | Flammability Limit in Air | |
| Vapor pressure | No information available | | Lower flammability limit: | No information available |
| Specific Gravity | < 1.0 | | Vapor density | No information available |
| Solubility in other solvents | No information available | | Water solubility | Insoluble in water |
| Autoignition temperature | No information available | | Partition coefficient | No information available |
| Kinematic viscosity | approx. 97.1 cSt @ 40 ° C | | Decomposition temperature | No information available |
| Explosive properties | | No information available | Dynamic viscosity | No information available |
| Oxidizing properties | | No information available | | |

Other information

Softening point No information available
Molecular weight No information available
VOC Content (%) No information available
Density No information available
Bulk density No information available

10. STABILITY AND REACTIVITY**Reactivity**

Not applicable

Chemical stability

Stability Stable under normal conditions

Possibility of Hazardous Reactions

Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid

Conditions to avoid No special storage conditions required

Hazardous Decomposition Products

Hazardous Decomposition Products Incomplete combustion may produce small amounts of carbon oxides

Incompatible materials

Incompatible materials

Oxidising agents

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

| | |
|----------------------------|--|
| Product Information | Product does not present an acute toxicity hazard based on known or supplied information |
| Eye contact | May cause slight irritation. |
| Skin contact | Substance may cause slight skin irritation. |
| Inhalation | Avoid breathing vapors or mists. |
| Ingestion | Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. |

| Components | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--|-----------------------|--------------------------|-----------------|
| 1,2 Benzenedicarboxylic acid di-c9-c11 branched alkyl ester - 68515-49-1 | > 60000 mg/kg (Rat) | = 16000 mg/kg (Rabbit) | - |

Information on toxicological effects

Delayed and immediate effects as well as chronic effects from short and long-term exposure

| | |
|---------------------------------|--|
| Sensitization | No sensitization responses were observed. |
| Mutagenic effects: | Did not show mutagenic or teratogenic effects in animal experiments. |
| Carcinogenicity | This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP. |
| Reproductive toxicity | This product does not contain any known or suspected reproductive hazards. |
| STOT - Single Exposure | None under normal use conditions. |
| STOT - Repeated Exposure | None under normal use conditions. |
| Aspiration hazard | Not applicable. |

Numerical measures of toxicity - Product Information

| | |
|---|---|
| Unknown Acute Toxicity | 0% of the mixture consists of ingredient(s) of unknown toxicity |
| The following values are calculated based on chapter 3.1 of the GHS document . | |
| ATEmix (dermal) | 41391 mg/kg |
| ATEmix (inhalation-dust/mist) | 1815 mg/l |

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects

0.32310% of the mixture consists of components(s) of unknown hazards to the aquatic environment

| 1,2 Benzenedicarboxylic acid di-c9-c11 branched alkyl ester - 68515-49-1 | |
|--|---|
| Algae/aquatic plants | 1.3: 96 h Pseudokirchneriella subcapitata mg/L EC50 |
| Fish | 0.55: 96 h Lepomis macrochirus mg/L LC50 static 0.62: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.66: 96 h Pimephales promelas mg/L LC50 static 1: 96 h Oncorhynchus mykiss mg/L LC50 static 1: 96 h Pimephales promelas mg/L LC50 flow-through |
| Crustacea | 0.18: 48 h Daphnia magna mg/L EC50 |

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility

The product is insoluble and floats on water.

| Components | Partition coefficient |
|---|-----------------------|
| 1,2 Benzenedicarboxylic acid di-c9-c11 branched alkyl ester - 68515-49-1 | 8.8 |

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

| | |
|-------------------------------|---|
| Disposal of wastes | Disposal should be in accordance with applicable regional, national and local laws and regulations. |
| Contaminated packaging | Do not reuse container. |

14. TRANSPORT INFORMATION

| | |
|-------------------|--|
| DOT | Not Regulated by any means of transportation |
| TDG | Not Regulated |
| IATA-DGR | Not Regulated |
| IMO / IMDG | Not Regulated |

15. REGULATORY INFORMATION

International Inventories

| | |
|----------------------|---|
| TSCA: | Listed in TSCA |
| DSL: | All of the components in this product are listed in DSL |
| EINECS/ELINCS | This product complies with EINECS/ELINCS |
| CHINA: | This product complies with China IECSC. |
| KECL: | This product complies with Korea KECL. |
| PICCS: | This product complies with Philippines PICCS. |
| AICS: | All the constituents of this material are listed on the Australian AICS |

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

Canada HPR Statement

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations (WHMIS 2015).

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

| | |
|-----------------------------------|----|
| Acute Health Hazard | No |
| Chronic Health Hazard | No |
| Fire Hazard | No |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

State Regulations (RTK)**California Proposition 65**

This product contains chemicals known to the state of California to cause birth defects or other reproductive harm

| Components | California Proposition 65 CRT List - Hazard Designation: |
|---|--|
| 1,2 Benzenedicarboxylic acid di-c9-c11 branched alkyl ester | Listed: April 20, 2007 Developmental Toxicity |

U.S. State Right-to-Know Regulations

| Components | NJRTK: | MARTK: | PARTK: |
|--|------------|------------|--------|
| 1,2 Benzenedicarboxylic acid di-c9-c11 branched alkyl ester - 68515-49-1 | Not Listed | Not Listed | Listed |

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION**NFPA:**

Health: 1

Flammability: 1

Instability 0

NFPA/HMIS * for Carc, Muta, Tera, Specific Organ *

HMIS health rating:

Health: 1

Flammability: 1

Physical hazards 0

Personal protection B

Issue Date 12-Jul-2018

Revision Date 12-Jul-2018

Revision Note

Reason for revision: Not applicable

Disclaimer

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.

End of Safety Data Sheet

SAFETY DATA SHEET

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: MOBIL POLYREX EM
Product Description: Base Oil and Additives
Product Code: 2015A020G010, 641688-85
Intended Use: Grease

COMPANY IDENTIFICATION

Supplier: AMPOL AUSTRALIA PTY LTD
ABN 17 000 032 128
2 Market Street
Sydney
New South Wales 2000 Australia

| | |
|--------------------------------------|----------------|
| 24 Hour Emergency Telephone | 1800 033 111 |
| Product Technical Information | 1300364169 |
| Supplier General Contact | +612 9250-5000 |
| FAX | +612 9250-5742 |

SECTION 2

HAZARDS IDENTIFICATION

This material is not hazardous according to regulatory guidelines (see (M)SDS Section 15).

Other hazard information:

Physical / Chemical Hazards:

No significant hazards.

Health Hazards:

High-pressure injection under skin may cause serious damage. Excessive exposure may result in eye, skin, or respiratory irritation.

Environmental Hazards:

Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as a mixture.

Hazardous Substance(s) or Complex Substance(s) required for disclosure

| Name | CAS# | Concentration* | GHS Hazard Codes |
|---|------------|----------------|---|
| 1H-IMIDAZOLE-1-ETHANOL, 2-(8-HEPTADECENYL)-4,5-DIHYDRO- | 95-38-5 | 0.1 - < 0.25% | H302, H314(1C), H373, H400(M factor 10), H410(M factor 1) |
| AMINES, C12-14-ALKYL, ISOOCTYL PHOSPHATES | 68187-67-7 | 1 - < 2.5% | H302, H312, H314(1C), H400(M factor 1), H410(M factor 1) |

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Other ingredients determined not to be hazardous up to 100%.

SECTION 4 FIRST AID MEASURES

INHALATION

Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

SKIN CONTACT

Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

First aid is normally not required. Seek medical attention if discomfort occurs.

NOTE TO PHYSICIAN

None

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Inappropriate Extinguishing Media: Straight streams of water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces

and to protect personnel.

Hazardous Combustion Products: Aldehydes, Incomplete combustion products, Oxides of carbon, Smoke, Fume, Sulphur oxides

FLAMMABILITY PROPERTIES

Flash Point [Method]: >204°C (399°F) [EST. FOR OIL, ASTM D-92 (COC)]

Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D

Autoignition Temperature: N/D

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

PROTECTIVE MEASURES

Avoid contact with spilled material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

For emergency responders: Respiratory protection: respiratory protection will be necessary only in special cases, e.g., formation of mists. Half-face or full-face respirator with filter(s) for dust/organic vapor or Self Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure. If the exposure cannot be completely characterized or an oxygen deficient atmosphere is possible or anticipated, SCBA is recommended. Work gloves that are resistant to hydrocarbons are recommended. Gloves made of polyvinyl acetate (PVA) are not water-resistant and are not suitable for emergency use. Chemical goggles are recommended if splashes or contact with eyes is possible. Small spills: normal antistatic work clothes are usually adequate. Large spills: full body suit of chemical resistant, antistatic material is recommended.

SPILL MANAGEMENT

Land Spill: Scrape up spilled material with shovels into a suitable container for recycle or disposal.

Water Spill: Stop leak if you can do so without risk. Confine the spill immediately with booms. Warn other shipping. Skim from surface

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING

Prevent small spills and leakage to avoid slip hazard.

Static Accumulator: This material is not a static accumulator.

STORAGE

Do not store in open or unlabelled containers.

SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

Biological limits

No biological limits allocated.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

Particulate

No protection is ordinarily required under normal conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

Nitrile, Viton

No protection is ordinarily required under normal conditions of use.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

No skin protection is ordinarily required under normal conditions of use. In accordance with good

Product Name: MOBIL POLYREX EM
Revision Date: 22 Mar 2021
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industrial hygiene practices, precautions should be taken to avoid skin contact.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing 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. Practise good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Solid
Form: Semi-fluid
Colour: Blue
Odour: Characteristic
Odour Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15 °C): 0.884
Flammability (Solid, Gas): N/A
Flash Point [Method]: >204°C (399°F) [EST. FOR OIL, ASTM D-92 (COC)]
Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D
Autoignition Temperature: N/D
Boiling Point / Range: > 330°C (626°F)
Decomposition Temperature: N/D
Vapour Density (Air = 1): N/D
Vapour Pressure: < 0.013 kPa (0.1 mm Hg) at 20 °C
Evaporation Rate (n-butyl acetate = 1): N/D
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): > 3.5
Solubility in Water: Negligible
Viscosity: 95 cSt (95 mm²/sec) at 40 °C
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/D
Melting Point: >250°C (482°F)
DMSO Extract (mineral oil only), IP-346: < 3 %wt

NOTE: Most physical properties above are for the oil component in the material.

SECTION 10 STABILITY AND REACTIVITY

Product Name: MOBIL POLYREX EM

Revision Date: 22 Mar 2021

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STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Excessive heat. High energy sources of ignition.

INCOMPATIBLE MATERIALS: Strong oxidisers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.

| | |
|-------------------|----------------------------------|
| SECTION 11 | TOXICOLOGICAL INFORMATION |
|-------------------|----------------------------------|

INFORMATION ON TOXICOLOGICAL EFFECTS

| Hazard Class | Conclusion / Remarks |
|--|--|
| Inhalation | |
| Acute Toxicity: No end point data for material. | Minimally Toxic. Based on assessment of the components. |
| Irritation: No end point data for material. | Negligible hazard at ambient/normal handling temperatures. |
| Ingestion | |
| Acute Toxicity: No end point data for material. | Minimally Toxic. Based on assessment of the components. |
| Skin | |
| Acute Toxicity: No end point data for material. | Minimally Toxic. Based on assessment of the components. |
| Skin Corrosion/Irritation: Data available. | Negligible irritation to skin at ambient temperatures. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 404 |
| Eye | |
| Serious Eye Damage/Irritation: Data available. | May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 437 492 |
| Sensitisation | |
| Respiratory Sensitization: No end point data for material. | Not expected to be a respiratory sensitizer. |
| Skin Sensitization: No end point data for material. | Not expected to be a skin sensitizer. Based on assessment of the components. |
| Aspiration: Data available. | Not expected to be an aspiration hazard. Based on physico-chemical properties of the material. |
| Germ Cell Mutagenicity: No end point data for material. | Not expected to be a germ cell mutagen. Based on assessment of the components. |
| Carcinogenicity: No end point data for material. | Not expected to cause cancer. Based on assessment of the components. |
| Reproductive Toxicity: No end point data for material. | Not expected to be a reproductive toxicant. Based on assessment of the components. |
| Lactation: No end point data for material. | Not expected to cause harm to breast-fed children. |
| Specific Target Organ Toxicity (STOT) | |
| Single Exposure: No end point data for material. | Not expected to cause organ damage from a single exposure. |
| Repeated Exposure: No end point data for material. | Not expected to cause organ damage from prolonged or repeated exposure. Based on assessment of the components. |

TOXICITY FOR SUBSTANCES

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| NAME | ACUTE TOXICITY |
|---|--|
| 1H-IMIDAZOLE-1-ETHANOL, 2-(8-HEPTADECENYL)-4,5-DIHYDRO- | Oral Lethality: LD 50 1265 mg/kg (Rat) |

OTHER INFORMATION

Contains:

Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or other screening tests. Dermal and inhalation studies showed minimal effects; lung non-specific infiltration of immune cells, oil deposition and minimal granuloma formation. Not sensitising in test animals.

IARC Classification:

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = IARC 1

2 = IARC 2A

3 = IARC 2B

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data for the material, components of the material, or for similar materials, through the application of bridging principals.

ECOTOXICITY

Material -- Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

MOBILITY

Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Base oil component -- Expected to be inherently biodegradable

BIOACCUMULATION POTENTIAL

Base oil component -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

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Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, 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.

| | |
|-------------------|------------------------------|
| SECTION 14 | TRANSPORT INFORMATION |
|-------------------|------------------------------|

LAND (ADG): Not Regulated for Land Transport

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

Marine Pollutant: No

AIR (IATA): Not Regulated for Air Transport

| | |
|-------------------|-------------------------------|
| SECTION 15 | REGULATORY INFORMATION |
|-------------------|-------------------------------|

This material is not considered hazardous according to Australia Model Work Health and Safety Regulations.

Product is not regulated according to Australian Dangerous Goods Code.

No Poison Schedule number allocated by the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) established under the Therapeutic Goods Act.

REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

Listed or exempt from listing/notification on the following chemical inventories (May contain substance(s) subject to notification to the EPA Active TSCA inventory prior to import to USA): AIIC, DSL, ENCS, IECSC, ISHL, KECI, TCSI, TSCA

| | |
|-------------------|--------------------------|
| SECTION 16 | OTHER INFORMATION |
|-------------------|--------------------------|

KEY TO ABBREVIATIONS AND ACRONYMS:

N/D = Not determined, N/A = Not applicable, STEL = Short-Term Exposure Limit, TWA = Time-Weighted Average

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):

H302: Harmful if swallowed; Acute Tox Oral, Cat 4

H312: Harmful in contact with skin; Acute Tox Dermal, Cat 4

H314(1C): Causes severe skin burns and eye damage; Skin Corr/Irritation, Cat 1C

H373: May cause damage to organs through prolonged or repeated exposure; Target Organ, Repeated, Cat 2

H400: Very toxic to aquatic life; Acute Env Tox, Cat 1

H410: Very toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 1

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THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

MotorActive: Section 01: Supplier Mailing Address information was deleted.

Perkal Pty Ltd Trading as Statewide Oil (South Australia): Section 01: Supplier Mailing Address information was deleted.

Perkal Pty Ltd Trading as Statewide Oil (Western Australia): Section 01: Supplier Mailing Address information was deleted.

Southern Cross Lubes (Victoria and Tasmania, New South Wales and Australian Capital Territory): Section 01: Supplier Mailing Address information was deleted.

Section 01: Company Contact Methods information was modified.

Section 01: Company Mailing Address information was modified.

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End of (M)SDS