Safety Data Sheet

According to Australia Model Code of Practice for the preparation of Safety Data Sheets for Hazardous Chemicals (GHS)

SECTION 1: Identification

Product Identifier **Powerflow™ NZ HE Hydraulic Oil**

Code **831315**

Other means of identification Phillips 66 Powerflow™ NZ HE Hydraulic Oil 32
Phillips 66 Powerflow™ NZ HE Hydraulic Oil 46
Phillips 66 Powerflow™ NZ HE Hydraulic Oil 68

Recommended use of the chemical and restrictions on use

Recommended use Hydraulic Fluid

Restrictions on use All others

24 Hour Emergency Phone Number CHEMTREC Australia +612 9037 2994
CHEMTREC Global +011 703 527 3887

Details of manufacturer or importer

Manufacturer/Supplier
Phillips 66 Lubricants
P.O. Box 4428
Houston, TX 77210

SDS Information
URL: www.Phillips66.com/SDS
Phone: 800-762-0942
Email: SDS@P66.com

Customer Service
Australia: 1300 744 554

Australian Importer
Oil & Energy Pty Ltd
20 Ambitious Link
Bibra Lake WA 6163

Australian Importer
Pacific Petroleum Products
1628 Ipswich Rd
Rocklea QLD 4106

SECTION 2: Hazard identification

Classified Hazards

Not classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonised System (GHS)

Other hazards which do not result in classification

PHNOC: None known

HHNOC: None known

Label elements, including precautionary statements

No classified hazards

SECTION 3: Composition/information on ingredients

Mixture

Chemical Name	CASRN	Concentration
Distillates, petroleum, hydrotreated heavy paraffinic	64742-54-7	<95
Lubricating oils, petroleum, C15-30, hydrotreated neutral oil-based	72623-86-0	<5
White mineral oil, petroleum	8042-47-5	<5

[1] All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4: First aid measures

Description of necessary first aid measures

Eye Contact: If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

Skin Contact: Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention. 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. (see Note to Physician)

Inhalation: First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. Seek immediate medical attention.

Ingestion: First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

Symptoms caused by exposure: Prolonged or repeated contact may dry skin and cause irritation. Inhalation of oil mists or vapours generated at elevated temperatures may cause respiratory irritation. Accidental ingestion can result in minor irritation of the digestive tract, nausea and diarrhea.

Medical attention and special treatment: Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

When using high-pressure equipment, injection of product under the skin can occur. In this case, the casualty should be sent immediately to the hospital. Do not wait for symptoms to develop. High-pressure hydrocarbon injection injuries may produce substantial necrosis of underlying tissue despite an innocuous appearing external wound. These injuries often require extensive emergency surgical debridement and all injuries should be evaluated by a specialist in order to assess the extent of injury. Early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

SECTION 5: Firefighting measures

Suitable extinguishing equipment: Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F / 100°C. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

Specific hazards arising from the chemical

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

Hazardous Combustion Products: Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulphur, nitrogen or phosphorus may also be formed.

Special protective equipment and precautions for fire fighters: For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapours and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

Hazchem code: None

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorised personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

Environmental Precautions: Stop and contain spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorised drainage systems, and natural waterways. Use water sparingly to minimize environmental

contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification.

Methods and material for containment and cleaning up: Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken. See Section 13 for information on appropriate disposal.

SECTION 7: Handling and storage

Precautions for safe handling: Keep away from flames and hot surfaces. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8). Spills will produce very slippery surfaces. High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.

Do not enter confined spaces such as tanks or pits without following proper entry procedures. Do not wear contaminated clothing or shoes.

Conditions for safe storage, including any compatibilities: Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Keep container(s) tightly closed and properly labeled. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to appropriate guidance pertaining to cleaning, repairing, welding, or other contemplated operations.

SECTION 8: Exposure controls/personal protection

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

Exposure control measures			
Chemical Name	**Australia (HCIS)**	**ACGIH**	**Phillips 66**
Distillates, petroleum, hydrotreated heavy paraffinic	---	TWA-8hr: 5 mg/m³ STEL: 10 mg/m³ as Oil Mist, if Generated	
Lubricating oils, petroleum, C15-30, hydrotreated neutral oil-based	---	TWA-8hr: 5 mg/m³ STEL: 10 mg/m³ as Oil Mist, if Generated	
White mineral oil, petroleum	---	TWA-8hr: 5 mg/m³ STEL: 10 mg/m³ as Oil Mist, if Generated	

Biological Limit Values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Eye/Face Protection: The use of eye protection that meets or exceeds EN 166 is recommended to protect against potential eye contact, irritation, or injury. Depending on conditions of use, close fitting eye protection and a face shield may be necessary.

Skin/Hand Protection: The use of gloves impervious to the specific material handled that comply with EN 374 is advised to

prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. Suggested protective materials: Nitrile Wear thermal insulating gloves and face shield or eye protection when working with materials that present thermal hazards (hot or cold).

Respiratory Protection: A respiratory protection programme that follows recommendations for the selection, use, care and maintenance of respiratory protective devices in EN 529:2005 should be followed whenever workplace conditions warrant a respirator's use. Where there is potential for airborne exposure above the exposure limit an approved air purifying respirator equipped with Type A, organic gases and vapours filter (as specified by the manufacturer) in combination with Type P2 - Medium efficiency particle filters may be used. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health.

Environmental Exposure Controls: Refer to Sections 6, 7, 12 and 13.

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

SECTION 9: Physical and chemical properties

Appearance:	Amber, Transparent
Physical Form:	Liquid
Odour:	Petroleum
Odour Threshold:	Not determined
pH:	Not applicable
Melting/Freezing Point:	Not determined
Initial Boiling Point/Range:	Not determined
Flash Point:	> 198.5 °C
Evaporation Rate (nBuAc=1):	Not determined
Flammability (solid, gas):	Not applicable
Upper Explosive Limits (vol % in air):	Not determined
Lower Explosive Limits (vol % in air):	Not determined
Vapour Pressure:	Not determined
Vapour Density	>1
Relative Density (water=1):	0.860 - 0.873 @ 15.6ºC
Solubility (ies):	Solubility in water: Negligible
Partition Coefficient (n-octanol/water) (Kow):	Not determined
Auto-ignition Temperature:	Not determined
Decomposition Temperature:	Not determined
Viscosity:	6.5 - 11.5 cSt @ 100°C; 28.8 - 74.8 cSt @ 40°C
Other physical or chemical parameters relevant to health and safety	
Pour Point:	< -48 °C
Bulk Density:	7.16 - 7.27 lbs/gal

SECTION 10: Stability and reactivity

Reactivity: Not chemically reactive.

Chemical stability: Stable under normal ambient and anticipated conditions of use.

Possibility of hazardous reactions: Hazardous reactions not anticipated.

Conditions to avoid: Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.

Incompatible materials: Avoid contact with strong oxidizing agents and strong reducing agents.

Hazardous decomposition products: Not anticipated under normal conditions of use.

SECTION 11: Toxicological information

Information on Toxicological Effects

Substance / Mixture

Acute Toxicity	Hazard	Additional Information	LC50/LD50 Data
Inhalation	Unlikely to be harmful		>5 mg/L (mist, estimated)
Dermal	Unlikely to be harmful		> 2 g/kg (estimated)
Oral	Unlikely to be harmful		> 5 g/kg (estimated)

Likely Routes of Exposure: Inhalation, eye contact, skin contact

Skin Corrosion/Irritation: Not expected to be irritating. Repeated exposure may cause skin dryness or cracking.

Serious Eye Damage/Irritation: Not expected to be irritating.

Skin Sensitisation: No information available on the mixture, however none of the components have been classified for skin sensitisation (or are below the concentration threshold for classification).

Respiratory Sensitisation: No information available.

Germ Cell Mutagenicity: No information available on the mixture, however none of the components have been classified for germ cell mutagenicity (or are below the concentration threshold for classification).

Carcinogenicity: No information available on the mixture, however none of the components have been classified for carcinogenicity (or are below the concentration threshold for classification).

Reproductive Toxicity: No information available on the mixture, however none of the components have been classified for reproductive toxicity (or are below the concentration threshold for classification).

Specific Target Organ Toxicity (Single Exposure): Not expected to cause organ effects from single exposure.

Specific Target Organ Toxicity (Repeated Exposure): Not expected to cause organ effects from repeated exposure.

Aspiration Hazard: Not expected to be an aspiration hazard

Information on Toxicological Effects of Components

Lubricant Base Oil (Petroleum)

Carcinogenicity: Repeated application of heavy fuel oils containing high polycyclic aromatic hydrocarbon content has been shown to cause an increased incidence of skin tumors in mice.

SECTION 12: Ecological information

Ecotoxicity: All acute aquatic toxicity studies on samples of lubricant base oils show acute toxicity values greater than 100 mg/L for invertebrates, algae and fish. These tests were carried out on water accommodated fractions and the results are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon compositions.

Persistence and Degradability: The hydrocarbons in this material are not readily biodegradable, but since they can be degraded by microorganisms, they are regarded as inherently biodegradable.

Bioaccumulative Potential: Log Kow values measured for the hydrocarbon components of this material are greater than 5.3, and therefore regarded as having the potential to bioaccumulate. In practise, metabolic processes may reduce bioconcentration.

Mobility in Soil: Volatilisation to air is not expected to be a significant fate process due to the low vapour pressure of this material. In water, base oils will float and spread over the surface at a rate dependent upon viscosity. There will be significant removal of hydrocarbons from the water by sediment adsorption. In soil and sediment, hydrocarbon components will show low mobility with adsorption to sediments being the predominant physical process. The main fate process is expected to be slow biodegradation of the hydrocarbon constituents in soil and sediment.

Other adverse effects: None anticipated.

SECTION 13: Disposal considerations

Disposal Recommendations: This material under most intended uses would become "waste oils" due to contamination by physical or chemical impurities. Whenever possible, recycle "waste oils" in accordance with current national and regional provisions.

Empty Containers: Container contents should be completely used and containers emptied prior to discard. Empty drums should be properly sealed and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with applicable regulations.

SECTION 14: Transport information

UN Number: Not regulated
UN proper shipping name: None
Transport hazard class(es): None
Packing Group: None
Environmental Hazards: This product does not meet the ADG/UN/IMDG/IMO criteria of a marine pollutant
Special precautions for user: None
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable
Hazchem code: None

SECTION 15: Regulatory information

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)
No Poisons Schedule number allocated.

National Pollutant Inventory (NPI)
Not listed

The Montreal Protocol on Substances that Deplete the Ozone Layer
Not applicable

The Stockholm Convention on Persistent Organic Pollutants
Not applicable

The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
Not applicable

Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention)
Not applicable

Inventory Status:
All components are listed on the Australian Inventory of Chemical Substances (AICS) or are exempt.

SECTION 16: Other information

Issue Date:	Previous Issue Date:	SDS Number	Status:
06-Feb-2018	None	831315	FINAL

Revised Sections or Basis for Revision:
New SDS

Guide to Abbreviations:

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); GHS = Globally Harmonized System; HCIS = Hazardous Chemical Information System; IARC = International Agency for Research on Cancer; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NTP = National Toxicology Program; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit;

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