

DURAPAC

ENGINEERED FOR RELIABILITY

Data Sheet & MSDS

Durapac Hydraulic Oil Model – DHO Series



1.0 Product Information

DURAPAC – Hydraulic Oil is premium hydraulic oil; Hplex S Series, for use in all types of hydraulic systems and equipment. It is blended from HVI virgin base stocks and contains a special thermally stable additive (ZDDP) which inhibits oxidation, protects bearings from corrosion and prevents wear. Hplex S Series Oil provides excellent performance in vane pumps and high-pressure systems. It caters for most hydraulic equipment, such as machine tools, earthmoving equipment, forklifts, hydraulic presses, cylinders and extruders. In addition to meeting all major global hydraulic performance specifications, Hplex S Series Oils reduce wear, valve sticking, metal transfer and filterability issues; handling more demanding duty cycles (e.g., with continuous production or in continuous service of leased equipment); and resists oil degradation at higher operating temperatures.

Grade	22	32	46	68	100
Viscosity (Typical cSt @ 40°C)	22	32	46	68	100
Viscosity (Typical cSt @ 100°C)	4.2	5.6	7.1	8.8	11.4
Viscosity Index	101	101	101	101	101
Specific Gravity @ 15.6° C/15.6° C ASTM D 1298	0.853	0,872	0.879	0.868	0.874
Copper Strip Corrosion ASTM D 130, 3 hrs @ 100° C	-	-	1B	-	-
Rust Characteristics Proc B ASTM D 665	-	-	Pass	-	-
Pour Point, °C	-30	-27	-25	-25	-24
FZG 4-Square Load Support DIN 51354	-	-	12	-	-

2.0 Application

Use in the majority of hydraulic systems in earthmoving equipment, machine tools, forklifts, presses, cylinders and extruders or whenever the following specifications are required.

⚠ Do NOT use in hydraulic equipment with silver bearing surfaces - in this case use zinc free Hplex ZF Series Oils

3.0 Standards

- Meets or exceeds the following:
- Eaton Brochure 694 for 35VQ25A (formerly Vickers 1-286-S, M-2950-S)
- DIN 51524, Part 2 (HLP) & Part 3 (HVLP)
- Denison HF-1, HF-2, HF-0
- Commercial Hydraulics except those with silver bearing surfaces
- General Motors LS -2
- AFNOR NF E 48-603 HM and HV
- Racine variable volume vane pumps
- Cincinnati Milacron P.68, P.69, P.70

MATERIAL SAFETY DATA SHEET

Compiled according to Safe Work Australia and the GHS

Creation/Revision Date: 14-Jul-16
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1. IDENTIFICATION

Product Identifier	HYPLEX S ISO 32
Product Code	1102
Other Means of Identification	Base Oil and Additive Mixture
Recommended Use of the Chemical and Restriction on Use	Industrial hydraulic oil
Details of Manufacturer or Importer	Lidomont Pty. Ltd., trading as Prolube Lubricants 15 Pinnacle Street, Brendale, Queensland, 4500
Phone	07 3881 1733 (+61 7 38811733 – International)
Emergency Telephone	000 (Australia Only)
Poisons Information Centre Phone	13 11 26

2. HAZARDS IDENTIFICATION

Physical Hazard(s)	Not classified as Hazardous according to Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.
Health Hazard(s)	Not classified (All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 Test, hence are not classified as a carcinogen.)
Environment Hazard(s)	Not Classified
GHS Label Elements	None Applicable
Signal Word	No Signal Word

Hazard Statement(s)
Void

Precautionary Statement(s): General

- P101** If medical advice is needed, have product container or label at hand
- P102** Keep out of reach of children
- P103** Read label before use

Precautionary Statement(s): Prevention, Response, Storage and Disposal
Not applicable

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Component	CAS Number	Concentration
Distillates hydrotreated heavy paraffinic; Baseoil - unspecified	64742-54-7	> 90%
Proprietary Additives		to 100%

4. FIRST AID MEASURES

Inhalation

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

Skin contact

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse. 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.

5. FIRE FIGHTING MEASURES

Suitable extinguishing equipment

In case of fire use dry chemical, foam or carbon dioxide fire extinguisher. DO NOT use water.

Specific hazards arising from the chemical

Combustion products may contain carbon monoxide and carbon dioxide and smoke. Closed containers may explode when exposed to extreme heat. Containers close to fire should be removed if safe to do so. Use water spray to cool fire exposed containers.

Special protective equipment and precautions for firefighters

Wear Safe Work Australia approved self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

No action should be taken which might involve personal risk or without suitable training. Use Safe Work Australia approved respiratory protection, chemical resistant gloves, protective clothing and safety boots.

Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation. Extinguish all sources of ignition. Avoid sparks and open flames. No smoking.

Environmental precautions

In the event of a major spill, prevent spillage from entering drains or water courses, basements or confined spaces. Dyke far ahead of liquid spill for later recovery and disposal.

Methods and materials for Containment and cleaning up

Stop leak if safe to do so and absorb spill with sand, earth, vermiculite or some other absorbent material.

Collect the spilled material and place into a suitable container for disposal according to local regulations, preferably using a licensed waste disposal contractor.

7. HANDLING AND STORAGE

Precautions for safe handling

Use appropriate personal protective equipment – see Section 8. Use safe work processes to avoid eye or skin contact and inhalation of vapours. Use only in well ventilated areas.

Do not store in contact with food, beverages or tobacco products. Eating drinking or smoking in areas where this product is stored or processed should be prohibited. Always wash thoroughly after handling. Wash contaminated clothing and other protective equipment before storage or reuse. Provide eyewash fountains and safety showers in close proximity to points of use.

Conditions for safe storage

Store in accordance with local regulations in a cool, dry and well ventilated area. Store in original container tightly closed and away from incompatible materials (see Section 10). Check regularly for leaks and physical damage. Opened containers should be carefully resealed and stored in an upright position. Empty containers may contain residues and be dangerous. Store and use only in equipment designed for use with this type of product. Use appropriate bunding or containment to prevent environmental contamination.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure control measures

Mineral Oil Mist TWA 5mg/m³ Safe Work Australia

Engineering controls

Engineering controls should be in place as a primary source of protection over the use of Personal Protective Equipment. Ensure adequate ventilation of the working area or provide exhaust ventilation to keep the relevant airborne concentrations below acceptable levels.

Individual protection measures

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.

Eye and face protection: If contact is likely, safety glasses with side shields are recommended.

Skin 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 chemical resistant, nitrile or viton.

Long sleeve and long pants will provide protection.

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. A particulate type respirator should be considered for this material. No special requirements under ordinary 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.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Form	Viscous liquid
Colour	Clear, pale straw
Odour	Mild oil
Odour Threshold	Not determined
pH-Value	Not applicable
Melting point/Melting range	Not applicable
Initial Boiling Point/Boiling Range	> 280 °C
Flash Point	> 204 °C (ASTM D-93)
Flammability	Combustible Liquid Class 2
Auto-ignition Temperature	>320 °C
Decomposition Temperature	No information available
Explosion Limits: Lower	1 Vol % (typical)
Upper	10 Vol % (typical)
Vapour Pressure at 20 °C	< 0.5 Pa
Relative Density at 15 °C	0.86-0.92
Vapour Density	>1
Evaporation Rate	Not applicable
Solubility in Water	Negligible
Viscosity at 40 °C	~32 cSt
Viscosity at 100 °C	~5.4 cSt

10. STABILITY AND REACTIVITY

Reactivity: Will not occur.

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

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Conditions to avoid: Excessive heat. High energy sources of ignition.

Incompatible materials: Strong oxidisers.

Hazardous decomposition products: Material does not decompose at ambient temperatures.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: LD50/LC50 values relevant	
Oral LD 50	Not available
Dermal LD50	Not available
Inhalation LC50	Not available
Acute Health Effects	
Inhalation	No adverse health effects expected
Skin	No irritating effect
Eye	No irritating effect
Ingestion	No adverse health effects expected
Skin Corrosion / Irritation	Based on classification principles, the classification criteria are not met

(table continues next page)

<i>Serious Eye Damage / Irritation</i>	Based on classification principles, the classification criteria are not met
<i>Respiratory or Skin Sensitisation</i>	Based on classification principles, the classification criteria are not met
<i>Germ Cell Mutagenicity</i>	Based on classification principles, the classification criteria are not met
<i>Carcinogenicity</i>	Mineral oils, highly-refined are classified by IARC as Group 3 – not classifiable as to its carcinogenicity to humans
<i>Reproductive Toxicity</i>	Based on classification principles, the classification criteria are not met
Specific Target Organ Toxicity (STOT) -	
<i>Single Exposure</i>	Based on classification principles, the classification criteria are not met
<i>Repeated Exposure</i>	Based on classification principles, the classification criteria are not met
<i>Aspiration Hazard</i>	Based on classification principles, the classification criteria are not met
<i>Chronic Health Effects</i>	No information available
<i>Existing Conditions Aggravated by Exposure</i>	No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity: Expected to be harmful to aquatic organisms.

Persistence and degradability: Base Oil component is expected to be inherently biodegradable. Additive components show moderate biodegradation.

Bioaccumulative Potential: Limited potential for bioaccumulation.

Mobility in soil: Low solubility and miscibility. Floats on water. Expected to migrate from water to land.

13. DISPOSAL CONSIDERATIONS

Disposal method and Containers

Dispose according to applicable local and state government regulations.

Empty containers may contain residue and can be dangerous. Packaging should be recycled and disposal via incineration or landfill should only be considered when recycling not possible. 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.

Special precautions for incineration or landfill

Consult your state Land Waste Management Authority for more information. Product may be suitable for burning in an enclosed controlled burner for fuel value or disposal by incineration at very high temperatures.

14. TRANSPORT INFORMATION

	Australian Dangerous Goods (ADG)	International Maritime Dangerous Goods (IMDG)	International Air Transport Association (IATA)
<i>UN Number</i>	Not regulated	Not regulated	Not regulated
<i>UN Proper Shipping Name</i>	n/a	n/a	n/a
<i>Dangerous Goods Class</i>	n/a	n/a	n/a
<i>Packing Group</i>	n/a	n/a	n/a

Special precautions for user: None Available

15. REGULATORY INFORMATION

Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) – Poison Schedule

Not scheduled

Australian Inventory of Chemical Substances (AICS)

All components are listed or exempt

16. OTHER INFORMATION

Creation Date: 14-Jul-16

Prepared by Lidomont Pty Ltd, 15 Pinnacle St Brendale QLD

Revision information

Date and Changes: none

Abbreviations Used

GHS, Globally Harmonised System of Classification and labelling of Chemicals

CAS, Chemical Abstracts Service (Division of American Chemical Society)

LC50, Lethal concentration 50%

LD50, Lethal dose 50%

STEL, Short Term Exposure Limit

TWA, Time Weighted Average

UN, United Nations

n/a, not applicable

Disclaimer

This SDS is prepared in accord with the Safe Work Australia document "Code of practice for the Preparation of Safety Data Sheets for Hazardous Chemicals – December 2011. The information and recommendations contained herein are, to the best of Prolube's knowledge and belief, accurate and reliable as of the date issued. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet. You can contact Prolube to insure that this document is the most current available from Prolube. The information and recommendations are offered for the user's consideration and examination. It is the user's responsibility to satisfy itself that the product is suitable for the intended use. If buyer repackages this product, it is the user's responsibility to insure proper health, safety and other necessary information is included with and/or on the container. Appropriate warnings and safe-handling procedures should be provided to handlers and users.