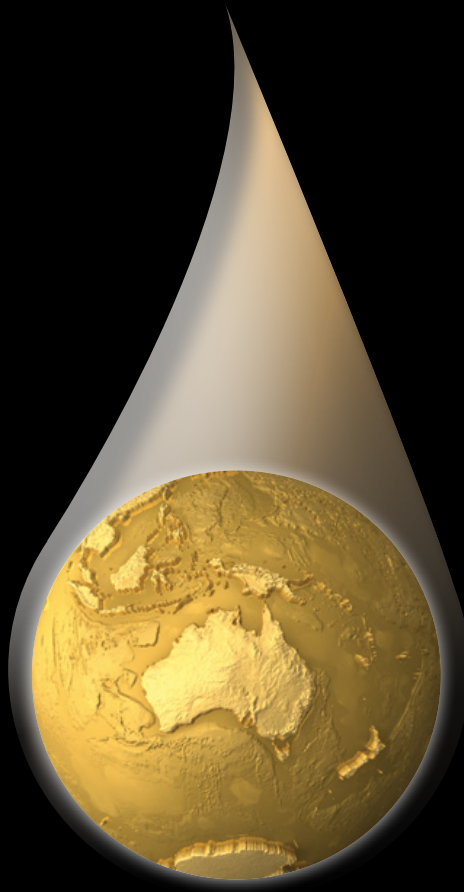




A Better Class of Oil



# MARINE PRODUCTS

Proudly Australian since 1926

JULY 2014

# A Better Class of Oil for 88 years...

From small beginnings in 1926, Les Mecoles founded Penrite Oil Company, soon purchasing his first factory in Melbourne, Australia, manufacturing high quality lubricants from Pennsylvania base stocks, regarded at the time as the best in the world.

In 1979, due to ill health, Les sold the company to John Dymond, Lubrizol's Australian National Sales Manager, a mechanical engineer by trade and a car enthusiast at heart, who rapidly expanded the Penrite range of products. John's technical background and commitment to quality ensured that Penrite continued to produce the highest quality product for every application and this philosophy, implemented by John in 1979, remains a core value of the company to this day.

Establishing Team Penrite in the early 80's, John was able to complete all the R & D requirements for his products on the race track, not only with cars, but also bikes, karts and trucks!

Driven by his "every product, every application, every customer" philosophy John expanded and developed the capabilities and capacity of the business to produce specific products for any market, effectively ensuring Penrite has every industry segment covered.

Supported by the largest range of speciality products and all backed up with a 100% product guarantee, John established a product range and brand that is, today, synonymous for its high quality and reliability.

For 88 years Penrite has been family owned and managed. Today, Toby and Nigel Dymond manage this World Wide business from Melbourne, Australia, taking John's technical knowledge, his passion and his philosophy forward into the future.



## The Penrite Brand

Penrite blend and market a wide range of lubricants and we are continuously developing our range. We have strong international technology partners from all over the globe which allows us to offer products to suit most applications.

Our logo has evolved over the years to its current form to emulate our motto

"Penrite - A Better Class of Oil"



A Better Class of Oil

## Our Vision & Mission

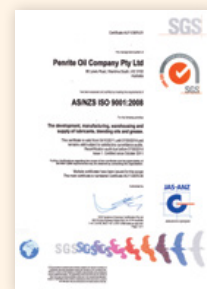
**Vision:** To deliver innovative and tailored lubricant products and services to our customers globally.

**Mission:** To partner with our customers to deliver sustainable and long term growth through our passion and commitment to excellent service, delivery and product quality.

## Company Information

Penrite Oil Company Pty Ltd is one of the largest independent oil blenders and marketers in Australia. We are a 100% Australian, family owned business with 88 years of industry experience.

Our Head Office is in Wantirna South, Melbourne, the capital of Victoria, Australia. Our main markets are in Australia, New Zealand & United Kingdom. In addition we sell our products in Europe, Asia and America.



## Environmental Commitment

We're committed to conduct our world-wide business in a manner that is environmentally responsible. Our ultimate aspiration is to minimise the environmental impact of its manufacturing and sales and distribution operations.

Penrite strives to minimise this environmental impact by reducing emissions and developing safe and sustainable, production, storage and distribution methodologies.

The key parts of this environmental commitment and as a signatory to the Australian Packaging Covenant include:

- Using recyclable packaging
- Compliance with environmental laws, regulations and licences
- Ensure environmentally responsible behaviour is practiced within Penrite
- Recycling product packaging
- Minimise waste and conserve resources
- Explore opportunities for waste recycling and recovery



## Approvals

Penrite has a number of products that are approved by major manufacturers or registered with industry bodies. Below are examples of some of our many approvals.



## Business Partners

Penrite believes that our business partners are one of the keys to our success. Our commitment is to treat all suppliers, customers, and other partners in our business ethically, honestly, and with respect.

From the perspective of our customers, our philosophy is that while every customer is a partner with us in the joint success of our businesses, each has specific needs and must be treated individually. A “one offer fits all” approach will not permit our customers to maximise the potential of their oil business with us.

## Technical Services

Having the right product for the right application is nowadays critical to the customer and to Penrite. We have an extensive database of equipment to enable the correct product to be selected.

This is accessible in many ways:

### Self Service

- Web Based Recommendation Guide
- Printed Recommendation Guide
- Mobile Guide available from your smart phone application
- Technical bulletins

or

### Talk to us

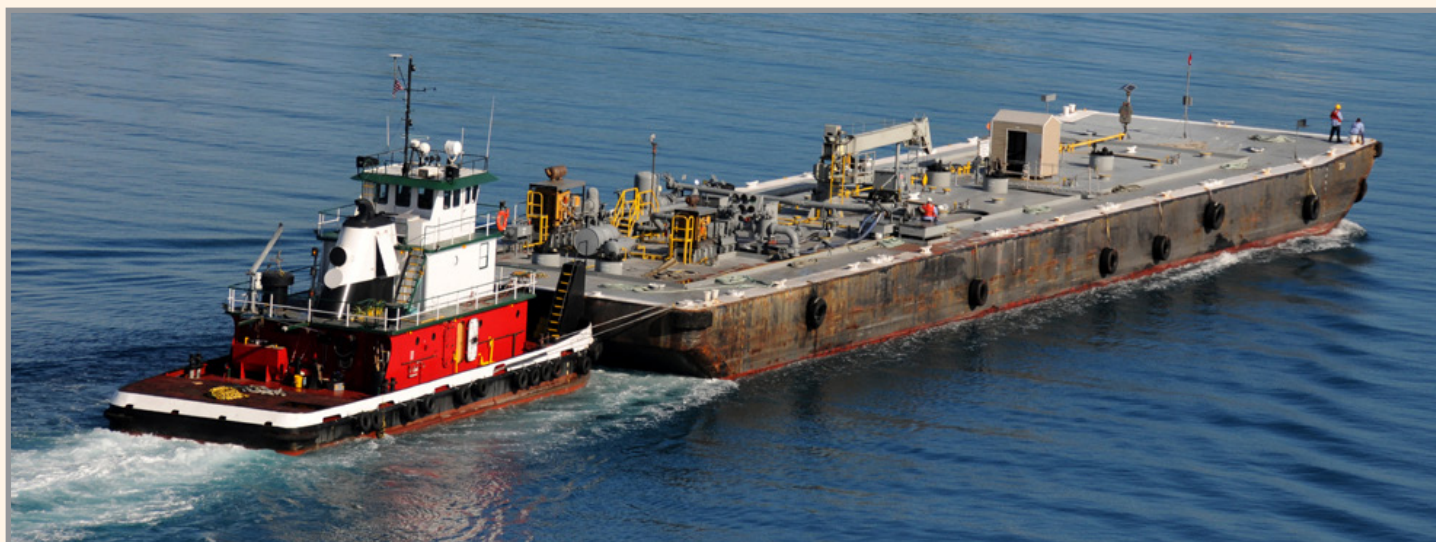
The Technical Services Hotline is available 7 days a week and is based in Melbourne Australia. Our Technical Services Experts have extensive experience and knowledge of lubricants and applications. They also have access to additional resources for the less commonly available or even historical equipment as well as product equivalents.

**Help Line: 1300 PENRITE (1300 736 748), (+613 9801 0877 International) or you can email us at [lubetech@penriteoil.com](mailto:lubetech@penriteoil.com)**

Other Technical Services offered to all customers include:

- Lubrication Surveys
- Client Data Base Updates
- Safety Data Sheets
- Product Training

**Penrite guarantee the performance of all our products when used in the correct applications as specified in our Recommendations Listing and Product Information Sheets.**





## What is Penrite Industrial Division?

Penrite Industrial Division (PID) consists of a team of dedicated lubricants professionals who provide focused and specialist support to the Industrial Market Sector.

This team has over 50 years of experience from within the lubricants industry coming not only from within Penrite but also from companies such as BP, Castrol and Caltex.

The teams focus is to assist you our valued Penrite Customer with making well informed decisions on your lubricants needs and these include:

- On site visits ensuring you are fully informed on all the performance benefits of Penrite Technology
- Lubrication Surveys ensuring the right oil is used and that products are rationalised to reduce mis-application
- Creation of bespoke products for specific applications
- Tailored technical solutions based on in depth mechanical understanding
- Delivery solutions
- Product and Product Application knowledge

We also draw on the experienced staff of our operation in the United Kingdom adding further Global oil industry experience as well as many years of on-site operational experience.

## What Products are Available?

Penrite have a large variety of products available “off the shelf” to suit many applications as well as having key International sourcing partners to ensure that the needs of the customer are fulfilled.

Penrite are an authorised reseller of CEPESA lubricants, adding a large range of specialised industrial products to our armoury. CEPESA is Spain's fourth largest industrial group in terms of turnover, and has also been in the market for more than 80 years.

Products from both ranges also carry full OEM (Original Equipment Manufacturer) approvals for OEM warranty applications.

Penrite also offer a Used Oil Analysis service for in-service condition monitoring and our Team can assist you to interpret these results.

## Can't find your Product?

No problem.

Penrite have technology partners around the globe where we are able to source and develop lubricants for your needs enabling us to match the “major oil companies” but with greater flexibility and customer focus.

Our supplier and technology network covers the USA, South East Asia, the UK, Spain and The Netherlands. It has been built up over many years and we have very strong partnerships with many companies.

While Penrite have a large variety of products available “off the shelf” to suit many applications, no company can offer 100% of all lubrication needs, but at Penrite we endeavour to provide as much as we can as a “Better Class of Oil”.

## Online

Our innovative web page is the hub for Penrite Information and advice integrating with our Facebook page. Penrite customers have the opportunity to participate in two way interaction with Penrite experts.

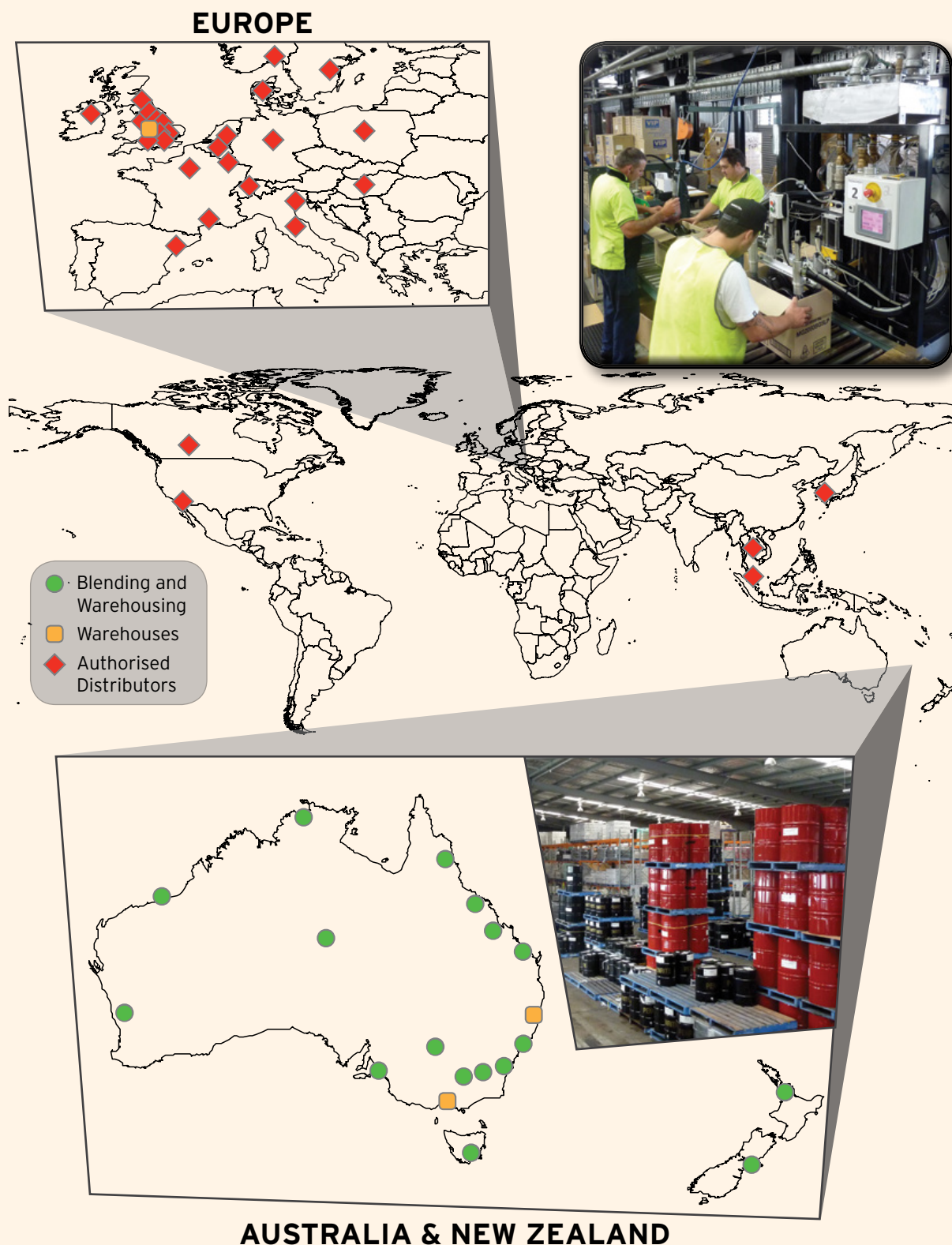
The Penrite Oil website is an invaluable resource for all customers and end users. It provides detailed information on the Penrite product range, a bulletin board for technical and industry updates, a user friendly recommendation guide, and a portal for the Penrite Top Class on-line ordering system.

## Delivery

Penrite has built a sound and reliable supply chain designed to offer the best service to our customers.

Our Customer Service Staff go that extra step to ensure you receive the products you need when you need them. Penrite has SLA's (Service Level Agreements) set up in each country of operation to ensure delivery satisfaction.

We have 3 blending facilities and an extensive network of 17 warehouses throughout Australian and New Zealand including 100+ stockists in the USA, Canada, Asia and Europe. Refer to our website to view the current list of stockist/distributors.







A Better Class of Oil



# Products in Detail



## Introduction

Over the years, Penrite has taken pride in having the right product for the right application. This also applies to the Marine Sector and as emissions standards change globally, this impacts the choice of lubricants that operators have to use. Protection of valuable equipment is paramount. No one can afford costly down time due to the use of the wrong or lower quality lubricant in their machinery.

From fishing fleets to coastal traders and international bulk carriers, Penrite have the range of products to suit. Our range incorporates the standard marine grades but also special gear oils that provide enhanced wear and rust protection, highly water resistant greases and biodegradable products. In addition to Australia-wide supply points, Penrite has Marine supply partners in the following countries:

### PORT

Singapore	All ports
Malaysia	Johor Bahru (Pasir Gudang, Tanjong Pelepas (PTP) Tanjung Langsat (TLP), Johor Port)
Malaysia	Port Klang, Melaka

### PARTNER

HIN LEONG MARINE
HIN LEONG MARINE
FAR EAST OIL TERMINAL TWO (M) SDN BHD (FEOSO)

## MAIN OILS

### TRUCK PISTON ENGINE OILS

#### MDEO RANGE

Penrite MDEO oils are heavy duty, low to medium speed, marine diesel engine oils manufactured from highly refined base stocks and modern technology additives. These oils are high in detergency and dispersancy and also contain effective anti-wear and anti-oxidant additives.

Penrite MDEO oils are available in a range of SAE grades and TBN (Total Base Number), to suit a wide variety of end uses and fuel types. They meet the engine oil performance requirements of API CF.

**MDEO 3012** and **4012** (12 TBN oils) and **MDEO 4015** (15 TBN oils) are designed for use in the crankcase of medium speed marine crosshead diesel engines and trunk piston diesel engines, including turbocharged, operating on diesel or light residual fuels such as MDF (Marine Diesel Fuel). They can also be used as a system oil in slow speed crosshead engines with separate lubricators.

**MDEO 3030** (30 TBN oils) and **4040** (40 TBN oils) are designed for use in slow to medium speed diesel engines, including turbocharged, burning diesel, residual or high sulphur heavy fuels. They can be used as a cylinder lubricant in cross head engines as well as in trunk piston engines with separate cylinder lubricators. These lubricants are formulated to handle the formation of sludge that can result from fuel contamination, especially when using heavy fuels. This sludge is asphaltic in nature and can deposit in piston rings and surrounding areas. MDEO 3030 and 4040 will help keep the engine clean and reduce harmful piston deposits.

*Please contact your Penrite representative regarding the availability of the MDEO range.*

### CYLINDER OILS FOR CROSSHEAD ENGINES

#### MAR CYL OIL 7050

Penrite Mar Cyl Oil 7050 is a 70TBN highly alkaline heavy marine cylinder oil manufactured from high quality solvent refined base stocks. It is designed for the cylinder lubrication of cross-head type marine and stationary engines, especially those burning high sulphur residual fuels. Ideal for fuels with a sulphur content of over 3%. Not recommended for use as a crankcase lubricant.

### SYSTEM OILS FOR CROSSHEAD ENGINES

#### CSO 30

Penrite CSO 30 (Crosshead System Oil) is a premium crankcase lubricant for use in slow-speed crosshead diesel engines. It has a moderate level of alkalinity to neutralize acidic combustion products that can enter the crankcase. The combination of good detergency and the oxidation stability provides clean piston interiors where oil is used for cooling. Note that due to higher viscosity cylinder drip oil into the SAE 30 system oil the crankcase oil viscosity will often increase. Please contact your Penrite Representative for details.





## AUXILIARY AND HIGH SPEED DIESEL ENGINE OILS

### MARINE DIESEL 15W-40

Penrite Marine Diesel 15W-40 is an SAE 15W-40, semi-synthetic, mid ash marine diesel engine oil formulated with a carefully selected blend of high performance additives and a mix of mineral and synthetic base oils to provide complete protection for marine engines. It exceeds the requirements of API CI-4 and ACEA E4/E7 industry standards and also meets many marine engine manufacturers' performance specifications, including long oil drain requirements. Marine Diesel 15W-40 is designed for use in moderate to severe service, high speed and some medium speed four stroke European, U.S. and Japanese marine diesel engines, where a 15W-40 engine oil is required. It can be used in both turbocharged and naturally aspirated engines running either low or high sulphur diesel fuel. It is especially suited to coastal and fishing fleets but can also be used in recreational craft. Marine Diesel 15W-40 is formulated with additive technology that is highlighted by the inclusion of special corrosion inhibitors as well as a 12.6 TBN, allowing it to be able to achieve long oil drain requirements while providing outstanding engine protection for the life of the oil drain.



### ENVIRO PLUS 10W-40

Penrite Enviro Plus 10W-40 is a state-of-the-art, fully synthetic, European style extended drain, ultra high performance (UHPD) diesel oil formulated with additives of the highest standards to ensure protection against wear, corrosion, oil oxidation and sludge. Penrite Enviro Plus 10W-40 meets the requirements of ACEA E4/E6/E9 and API CJ-4/SM. Penrite Enviro Plus 10W-40 is primarily designed for use in modern four-stroke naturally aspirated and turbocharged European diesel engines including for extended drain intervals. A 12.2 TBN oil, Enviro Plus 10W-40 has been optimised to lubricate the latest Euro IV and Euro V emissions European diesel engines. Approvals: Cummins CES 20081, MB-Approval 228.51, Mack EO-O Premium Plus, Volvo VDS 4, Renault RLD-3, JASO DH-2 (On-File)



### DIESEL HD

Penrite Diesel HD is an SAE 15W-40 high performance, heavy duty, low ash mineral diesel engine oil for use with and without DPF and SCR Systems. It is made from a combination of hydrocracked base stocks and the latest OEM approved additive technology. Diesel HD exceeds the latest requirements of API CJ-4/SM and the European ACEA E9 and carries many formal OEM approvals. Diesel HD is designed for use in post 2006, EPA 07 compliant American diesel engines, both naturally aspirated and turbocharged, introduced to meet the new Australian ADR emissions regulations. May also be used in Euro IV and Euro V compliant engines. Meeting and exceeding the European ACEA E9 specification as well as Japanese JASO DH-2, Diesel HD is an ideal mixed fleet oil and can be used for normal drain intervals in European and Japanese diesel engines. It is ideal for use in high speed and some medium speed diesel engines used in marine environments. Approvals: Cummins CES 20081, MAN 3575, MB-Approval 228.31, Mack EO-O Premium Plus, Volvo VDS 4, Renault RLD-3, Detroit Diesel DFS Oil Specification 93K218 Conformance



### DIESEL FX

Penrite Diesel FX is a SAE 15W-40 mid ash, Full Zinc, diesel engine oil formulated with high quality additives and hydrocracked mineral oils. Diesel FX exceeds the requirements of API CI-4 PLUS/SL and ACEA A3/B3/E7. It is designed predominantly for use in four stroke heavy duty diesel engines. It can be used in both turbocharged and naturally aspirated engines in on-highway and off-highway applications. Diesel FX is ideal for use in mixed fleets on heavy duty vehicles where API CI-4 PLUS or lower and ACEA E7/E5 is specified by the manufacturer. The strong petrol and ACEA light duty (A3/B3) performance makes Diesel FX suitable for use in light duty petrol and diesel engines, including those from Europe. It is an ideal for use in high speed and some medium speed, diesel engines used in marine environments as well for pumps and gensets.



### MONO TRUCK 30, 40 AND 50

Penrite Mono Truck oils are designed for use in all engines that require a monograde oil, including pre 1983 Japanese engines (Mono Truck SAE 30) and Detroit Diesel Two Stroke engines. It is also suitable for many older design small diesel engines used in fishing boats and trawlers, and in stationary engines. The SAE 30 grade may also be used in Komatsu powershift transmissions and Allison transmissions requiring Allison C3 oils. The SAE 40 grade (API CF-2) is primarily designed for use in Detroit Diesel Two Stroke engines. The SAE 50 grade (API CF-2) is recommended in higher ambient conditions and may also be used in manual transmissions requiring API GL1 90 or API CC/CD 50 engine oils. It is the only viscosity grade that should be used in Detroit Series 149 engines.



## GEAR OILS

### MARINE GEAR OIL SS

Marine Gear Oil SS are special purpose, semi-synthetic marine gear oils made with hydrocracked base oils and a non-sulphur phosphorus extreme pressure additive package. They contain an advanced vapour phase corrosion inhibitor to provide outstanding control of rust, even in salt water environments. An ISO 150 and a ISO "300" grade is available and both exceed API GL-4. Marine Gear Oil SS is designed for marine gearboxes where heavy loads and high levels of airborne water contamination are prevalent. The ISO 150 is also ideal for use in automotive style manual transmissions where a 20W-50 motor oil or a API GL-4 SAE 80W-90 gear oil is specified. Marine Gear Oil SS 300 is a heavier version suitable for use in marine and industrial gear boxes and also in differentials where API GL-4 SAE 85W-140 oils are required. The products were originally designed to exceed the requirements of Heimdal reduction gearboxes commonly used in tugs, fishing vessels, work boats, and other vessels requiring high pulling capacity, as well as for equipment operating in hard use or difficult conditions.



### INDUS GEAR OIL EP

Premium, extreme pressure industrial gear oils, manufactured from highly refined water white base oils and selected sulphur-phosphorus extreme pressure and anti-wear additives. Penrite Indus Gear Oil EP meets the requirements of API GL-3. Designed for use in industrial style gear boxes including in crushers, hoists, conveyors, winches, machine tools and lathes. They can also be used in chain drives, sprockets, plain and anti-friction bearings and slide guides. Available in ISO grades 68, 150, 220, 320, 460 and 680.



### GEAR OIL SYN 220

A premium full synthetic extreme pressure industrial gear oil, manufactured using carefully selected extreme pressure and anti-wear additives. Penrite Gear Oil Syn 220 meets the requirements of API GL-3 and AGMA 250.04 5EP. It is designed for use in industrial gear boxes including in crushers, hoists, conveyors, winches, machine tools and lathes. It can also be used in chain drives, sprockets, plain and anti-friction bearings and slide guides. Gear types include spur, helical, herringbone, bevel and even worm gears that need lighter oils. Can be used in bath, splash or oil mist lubrication systems operating at a wide range of temperatures. Other ISO grades available on request.



## HYDRAULIC OILS

### INDUS HV HYDRAULIC OIL RANGE

A range of premium quality, high viscosity index, ashless hydraulic oils made from selected hydro-treated base stocks, a highly shear stable viscosity modifier and an advanced anti-wear additive. In addition they contain a fluorescent dye to allow for easy identification in daytime or under UV light in dark conditions. Penrite Indus HV oils are designed for use in hydraulic systems subjected to wide range of ambient temperatures such as in marine environments, mining, construction and agricultural equipment and forestry. They are recommended for use in all types of hydraulic systems using vane, piston or gear pumps, air-line lubricators, vacuum pumps, lightly loaded gear sets and bearings (such as headstocks, windmill gears) and hydraulic hoists and jacks. Marine applications for all products include deck equipment, steering gear and bow thrusters. Available in ISO grades 32, 46, 68 and 100 and meet DIN 51524 Part 3 (HLP/HVLP), ISO 6743 Part 4, Type HV, AFNOR NFE 48-603, SAE MS1004 Type HV.



### INDUS MR HYDRAULIC OIL RANGE

A range of high quality, hydraulic oils made from selected base stocks, shear stable viscosity modifier and an ashless anti-wear additive. Penrite Indus MV oils are designed for use in hydraulic systems subjected to wide range of ambient temperatures such as in marine environments, mining, construction and agricultural equipment and forestry. They are recommended for use in all types of hydraulic systems using vane, piston or gear pumps, airline lubricators, vacuum pumps, lightly loaded gear sets and bearings (such as headstocks, windmill gears) and hydraulic hoists and jacks. Marine applications for all products include deck equipment, steering gear and bow thrusters. For maximum energy savings and protection, we recommend the Indus HV range. Available in ISO 46 and 68 grades and meets DIN 51524 Part 2 and ISO 6743 Part 4, Type HV.



### INDUS PRO HYDRAULIC OIL RANGE

Low zinc, premium quality hydraulic oils made from selected base stocks and an advanced anti-wear additive. Penrite Indus Pro Hydraulic Oils are recommended for use in all types of hydraulic systems using vane, piston or gear pumps, airline lubricators, vacuum pumps, lightly loaded gear sets and bearings (such as headstocks, windmill gears) and hydraulic hoists and jacks. Available in ISO grades 10, 32, 46 and 68 and meets DIN 51524 Part 2 (HLP Type).



## Biodegradable Products

### NYCO HYDRAUNYCOIL FH 4551

Nyco Hydraunycoil FH 4551 is a fire resistant ISO 68 hydraulic fluid based on a carboxylic ester. Its temperature operating range is between -20°C to +120 °C. It contains a specific corrosion inhibitor to prevent corrosion of steel, copper, aluminium and other metals. Hydraunycoil FH 4551 is also readily biodegradable. Hydraunycoil FH 4551 is intended for hydraulic equipment when the risk of fire is a concern and is widely used in high pressure equipment in steel and aluminium industry in which it has proven very efficient. The high level of biodegradability of Hydraunycoil FH 4551 is an additional benefit highly appreciated in tunnelling and marine industries. It is compatible with most elastomers and paints and in most cases, Hydraunycoil FH 4551 can be used directly in existing systems (designed for mineral-oil based hydraulic fluids) without any modification. System conversion can be achieved by a straight-forward drain-refill procedure. However, to keep the full benefit of fire resistance properties, ensure that the equipment is completely drained prior to filling it with Hydraunycoil FH 4551. Available in 208L drums only.



### CEPSA BIO HM-S

A biodegradable synthetic ester hydraulic fluid. Due to its careful formulation, this lubricant minimises the effects of environmental pollution. Enables operation with wide temperature ranges whilst maintaining its excellent lubricant, anti-wear and anti-corrosion properties. Particularly recommended for hydraulic systems which operate under severe use conditions that require exceptional anti-wear properties and a high time-stable viscosity index. Available in ISO grades: 32 (on request), 46, 68 and meets VDMA 24568 Class HEES and ISO 15380 Class HEES. EU Ecolabel listed FR/27/07. Also available are **Penrite Indus BIO Hyd E46 and E68** (20L drums). Please refer to your Penrite representative for availability of this product.





## COMPRESSOR OILS

### INDUS COMPRESSOR OIL 8KH 68

Penrite Indus Compressor Oil 8KH68 is a special ashless PAO and ester based product designed to provide extended oil drains in both oil injected and oil flooded rotary screw compressors. Based around the highly successful technology used in the Compressor Oil 4KH series, it provides exceptional wear protection and reduces varnish build up. Compressor Oil 8KH68 also contains a special shear stable synthetic base oil to help reduce deposit formation. Indus Compressor Oil 8KH is designed for use for up to 8000 hours in compressor types where ISO 68 grades are specified. May also be used in reciprocating compressors for up to 1000 hours with air discharge temperatures of up to 150°C, in rotary vane compressors for up to 2000 hours with air discharge temperatures of up to 85°C and in centrifugal compressors for 2-5 years with air discharge temperatures of up to 50°C. Meets SAE M 1003-2.



### INDUS COMPRESSOR OIL 4KH SERIES

Compressor Oil 4KH series are full synthetic, special ashless oil, designed to provide extended oil drains in both oil injected and oil flooded rotary screw compressors. Using the latest advances in compressor additive technology, they provide exceptional wear protection and reduce varnish build up. Compressor Oil 4KH46 and 4KH68 contain a special shear stable synthetic base oil to help reduce deposit formation. Compressor Oil 4KH is designed for use for up to 4000 hours in varying compressor types. May also be used in reciprocating Compressors for up to 500 hours with air discharge temperatures of up to 150°C, rotary vane compressors for up to 1000 hours with air discharge temperatures of up to 85°C and centrifugal compressors for 2-5 years with air discharge temperatures of up to 50°C. Compressor Oil 4KH series in the appropriate viscosity may also be used as steam turbine oil and for long drains in circulating systems in industrial machinery. Meets SAE M 1003-2. Available in ISO 46 and 68 grades.



### INDUS COMPRESSOR OIL 2KH SERIES

Indus Compressor Oil 2KH series are a range of mineral based air compressor oils made from pure hydrocracked base oils and an effective ashless additive system. This formulation provides enhanced protection against wear, rust and oxidation. Indus Compressor Oil 2KH series is designed for use in rotary screw, reciprocating and rotary vane compressors, providing up to 2000 hour oil drain periods. They meet the requirements of major compressor manufacturers such as Atlas Copco, Champion, Sullair and Ingersoll-Rand. Indus Compressor Oil 2KH32 is recommended for oil flooded or oil injected, single or two stage rotary screw compressors, with air discharge temperatures of <100oC, where an ISO 32 mineral oil is recommended. Indus Compressor Oil 2KH68 and 2KH100 are primarily designed for use in single-stage and multi-stage reciprocating compressors with discharge temperatures of up to 200oC. They are also suitable for use in oil flooded rotary screw compressors requiring these viscosities. 2KH100 may also be used in ammonia compressors where an ISO 100 oil is required. These oils can also be used in turbo blowers and centrifugal pumps, as well as being suitable as R&O (Rust & Oxidation) lubricants in circulating systems. Please Note: These products are not recommended for breathing air unit compressors. Meets DIN 51506 VDL and DIN 51524 Part 1. Products for use in refrigeration compressors are also available on request, please contact your Penrite representative for details.



## TURBINE OILS

### INDUS TM 46

Penrite Indus TM 46 is an ISO 46 mineral turbine oil formulated with highly-refined hydrotreated paraffinic base stocks and selected additives that provide it with excellent properties for multiple applications. Indus TM 46 is specially recommended for steam, gas or water turbines that require an oil with high oxidation stability, good water demulsibility and excellent foam resistance. Can be used in turbine associated gearing systems where a common lubricant is required. Will not attack or rust ferrous or non-ferrous metal components.



### CEPSA HD TURBINAS

Formulated with highly-refined and hydro-treated paraffin bases, with selected additives that confer excellent properties for multiple applications. These oils ensure excellent protection and lubrication for turbine components. They have powerful anti-rust capabilities, high chemical and thermal stability and very rapid deaeration. Specifically recommended for steam, gas and hydraulic turbines that require an oil with a long useful life and high stability against oxidation. Available in ISO grades: 32, 46 and 68 and meets ISO 6743-5 L TSA/TSE/TGA/TGB/TGE, DIN 51515 Part I (L-TD), ASTM D 4304 (Type I) and OEM ALSTHOM NBA-P-50001-A, GENERAL ELECTRIC GEK 28143A, GENERAL ELECTRIC GEK 32568F, SIEMENS TLV 901304, SOLAR Class II. Please contact your Penrite representative for details of this product.



### CEPSA TURBINAS EP

Especially formulated to lubricate steam or hydraulic turbine systems, especially in turboalternators or propellor turbines with gears and/or reducers, as well as special systems where a high-quality hydraulic oil with EP characteristics is required. Meets ISO 6743-5 L TSA/TSE/TGA/TGB/TGE, ALSTOM HTGD 90117, GENERAL ELECTRIC GEK 101941A, GENERAL ELECTRIC GEK 107395A, GENERAL ELECTRIC GEK 27070, GENERAL ELECTRIC GEK 28143B, GENERAL ELECTRIC GEK 46506D, GENERAL ELECTRIC GEK 32568F, SIEMENS TLV 901304/ 901305, SOLAR ES 9224. Available in ISO 32, 46 and 68 grades. Please contact your Penrite representative for details of this product.



### NYCO TURBONYCOIL 600

Gas Turbine oil fully approved by General Electric (all LM ground gas turbine models), Rolls-Royce (501K, RB211, Avon, Olympus, Tyne, Spey), Allison, Nuovo Pignone (PGT25, 20/2) where use in marine propulsion systems and power generators/pumps. Please contact your Penrite representative for details of this product.





## STERN TUBE OILS

### CEPSA STERNA

This product offers high viscosity and high performance. It emulsifies rapidly with seawater, maintaining a stable emulsion that is adhesive and an excellent lubricant, protecting the critical surfaces of the stern tube against corrosion even during extended periods under severe operating conditions. Particularly recommended for bearings/stern tube seals where lubricants with emulsifying properties are required. Especially developed for the lubrication of Cedervall type stern tubes installed on ships, and for certain propeller blade stabiliser bearings installed on passenger ships. ISO 320.



### Biodegradable Products

#### CEPSA STERNA BIO AND PENRITE STERNA BIO

Synthetic and biodegradable hydraulic fluid for stern tubes on ships. Minimises the effects of environmental pollution whilst also offering excellent anti-wear and anti-corrosion properties and a high natural viscosity index that is stable over time. It enables operation at a wide range of temperatures. Particularly recommended when there is a risk of water pollution, for hydraulic systems operating under severe conditions. Compatible with the seals used in hydraulic circuits (Viton, Perbunan, nitrile NBR, neoprene, silicone). ISO 100 (sold as a Penrite brand in 20L drums). Please contact your Penrite representative for availability of this product..





## GREASES

### MARINE GREASE

Penrite Marine Grease is an NLGI 2 green coloured, tacky, high temperature all-purpose grease manufactured from high quality mineral base oils and a lithium complex soap. It utilises a special anti-rust additive for enhanced protection in marine environments and tackiness additives to allow it to stay in place. Marine Grease has been formulated for use in many marine grease applications. These include boat trailer wheel bearings and general on-board greasing points in leisure craft and fishing fleets including winch gears, bearing buddies, stern drives, steering tubes and cables and prop shaft splines.



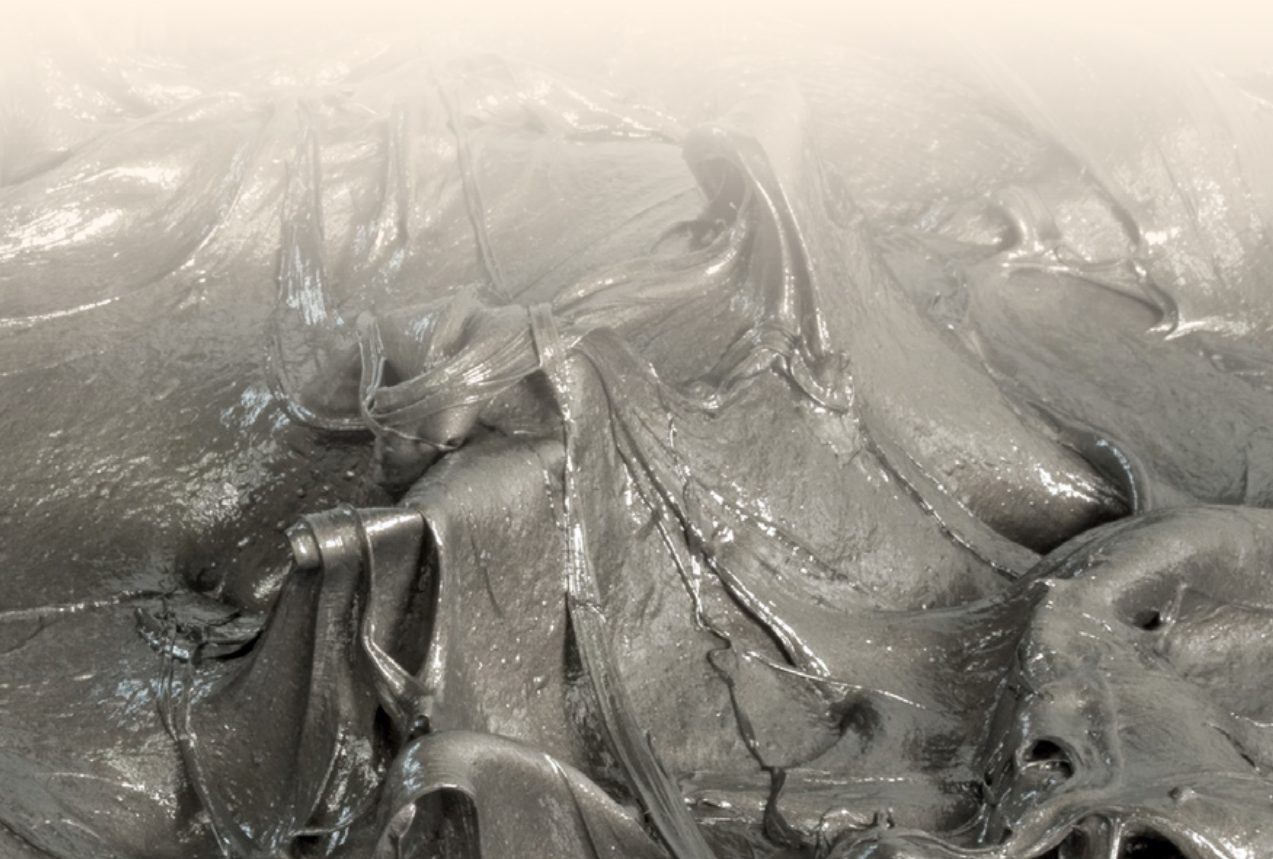
### ACT GREASE XEP 2

Penrite ACT Grease XEP2 is a tenacious, highly specialised semi-synthetic lithium complex grease designed for use in Agricultural and Construction equipment as well as on highway Trucks and marine deck equipment. Manufactured from a bismuth EP/AW system and utilising carefully blended polymers, it is coloured bright red-orange and meets NLGI 2. The polymers help provide excellent stay in place properties and to adhere to critical parts where it can better lubricate metal surfaces. This is a far better outcome than for some of the “super-stringy” greases that are good at sticking to themselves but require the equipment to work harder to overcome internal friction. ACT GREASE XEP2 can be used in various industrial, heavy duty automotive, agricultural, construction marine and mining applications, where it provides outstanding protection for low to medium speed bearings that are heavily loaded and where molybdenum greases are not required.



### INDGREASE CXOG-05

Penrite Indgrease CXOG-05 is an advanced technology, mixed-complex grease. It is made using a lithium-calcium complex soap with built-in extreme pressure and anti-wear properties. These are further enhanced by the addition of anti-oxidant and corrosion inhibitors. It also uses special tackifiers to help the product stay in place and adhere to critical surfaces where it can better lubricate metal surfaces. This is a far better outcome than for some of the super-stringy greases that are good at sticking to themselves but require the equipment to work harder to overcome internal friction. Indgrease CXOG-05 is recommended for use in severe heavy duty applications where high shock loads are common including those in corrosive environments. It is especially suited for open gear applications where greases containing solids are normally used. The microcrystalline structure of this grease functions in the same manner as the molybdenum type additives normally used. It is also suitable for use on many wire ropes on marine deck equipment.



### INDGREASE 100 LXEP2

Penrite Indgrease 100 LXEP 2 is a premium, high melting point, lithium complex grease of NLGI 2 consistency. It is a high temperature grease designed to meet the most demanding grease applications especially where a low base oil viscosity and long life is required. Indgrease 100 LXEP 2 is formulated to provide extreme pressure (EP) and anti-wear (AW) protection plus water resistance properties. Indgrease 100 LXEP 2 is also formulated to give a high level of oxidation, rust and corrosion protection. Indgrease 100 LXEP 2 is recommended for use in most types of industrial applications operating under high speed and conditions where shock loads, extreme pressure and vibration may occur. It can provide long life protection for rolling element bearings, plain bearings, gears and couplings in applications that include electric motors, pumps, fans and generators.



### INDGREASE BM3

Penrite Indgrease BM3 is a highly specialised no-melt type grease, manufactured from a Bentone clay with highly refined base oils and Molybdenum disulphide. It is a NLGI 3 grade. The excellent resistance to water makes it ideal for use in marine applications such as in dock equipment, cargo and warping winches, lifeboat davits, hatch covers and ships' stabilisers.



### CEPSA ARGAFORCE

A super adherent and corrosion-resistant product. This synthetic grease incorporates solid lubricants and other additives that have been carefully selected to provide total stability against the highest pressures and loads. The grease is free of compounds that are harmful to the environment. Especially formulated for drag lines on ships, fishing boats, tugboats and open gears. It improves running conditions and permits rolling and settling of surfaces by plastic deformation of the metal, achieving less wear, an absence of pitting and seizure, and quieter operation.



### Biodegradable Products

#### CEPSA ARGABIAGRASA EP

A grease specially developed for applications with biodegradability requirements. Formulated based on natural ester, lithium soap and a selection of anti-oxidant, anti-corrosion and extreme pressure additives, with a very low environmental impact. This grease has excellent lubrication, anti-wear and extreme pressure properties. It has high resistance to hydrocarbons and outstanding anti-corrosion properties, making it an ideal product for use in nautical mechanisms. NLGI 2 engine rooms. Contact your Penrite representative for further information on this grade.





## OUTBOARD AND PETROL ENGINES

### TWO STROKE PETROL ENGINES

#### MARINE OUTBOARD TWO STROKE OIL

Penrite Marine Outboard Two Stroke Oil is a low smoke oil manufactured from selected hydro-treated base oils and an ashless additive package. Designed for use in all water cooled two stroke outboard engines including oil injected and premix systems. It is NMMA TC-W3® Certified for service at the engine manufacturer's recommended fuel/oil ratio. NMMA TC-W3® Registration Number RL-00419J, API TC, JASO TB



### FOUR STROKE PETROL ENGINES

#### MARINE OUTBOARD 10W-30

Marine Outboard 10W-30 is a petrol engine oil containing specialised rust inhibitors and advanced low ash anti-wear additives for optimum engine protection in marine environments. It is certified against the requirements of NMMA FC-W® (Catalyst Compatible), an industry specification designed for the unique marine environment. Designed for use in all types of petrol four stroke outboard, inboard / stern drive engines where SAE 10W-30 is specified. NMMA FC-W® (Catalyst Compatible) Registration Number FC-00811M, API SM, ILSAC GF-4



#### MARINE OUTBOARD 10W-40

Marine Outboard 10W-40 is a petrol engine oil containing specialised rust inhibitors and anti-wear additives for optimum engine protection in severe marine environments. It is certified against NMMA FC-W®, an industry specification designed for the unique marine environment. Designed for use in all types of petrol four stroke outboard engines as well as inboard/stern drive petrol engines where SAE 10W-40 and SAE 15W-40 oils are specified. NMMA FC-W® Registration Number FB-20210M, API SL, JASO MA.



#### MARINE INBOARD 25W-40

Marine Inboard 25W-40 is a petrol engine oil containing specialised rust inhibitors and anti-wear additives for optimum engine protection in marine environments. Designed for use in inboard and stern drive petrol engines, it can be used where SAE 25W-40 and SAE 30 oils are required. It is also NMMA FC-W® certified, meaning the National Marine Manufacturers Association has approved this oil to be used in Four Stroke Marine engines where this viscosity is specified. Not suitable for diesel engines. NMMA FC-W® Registration Number FB-20120M, API SL, JASO MA.



### Biodegradable Products

#### BIOMARINE OUTBOARD TWO STROKE OIL

Biomarine Outboard is a biodegradable, low smoke, clean burn oil offering less environmental impact than conventional 2 stroke motor oils. It is ashless, meaning soot and other combustion chamber deposits are minimised. Certified for service NMMA TC-W3® at the engine manufacturers recommended fuel/oil ratio. Biomarine Outboard Two Stroke Oil is recommended for all types of outboard motors and Jet Skis, and can be used in direct injection engines as well as premix systems at mixing ratios specified by the manufacturer. NMMA TC-W3® Registration Number RL-33201M, API TC





## OTHER PRODUCTS

### DIESEL INJECTOR CLEANER

A state of the art 2 in 1 diesel fuel treatment that combines an advanced set of additives to clean and protect fuel system components and improve the combustion quality of diesel fuel. Diesel Injector Cleaner cleans the whole fuel delivery system, improves fuel economy, increases power, lowers emissions, makes starting easier, provides smoother idling and prevents against detonation damage.



### BIO CLEAN

An industrial strength, all purpose, heavy duty product that can be used as both a degreaser and detergent. It is water based, biodegradable and phosphate free, making it environmentally safer to use. It is also a quick-break detergent, allowing oil and water to separate making it easier to remove the oil/grease layer when used with oil/water separators, interceptor pits and oil traps. Bio Clean has a formulation based on orange oil and has a pleasant citrus fragrance. It is yellow in colour for ease of identification.



### RADIATOR INHIBITOR

Radiator Inhibitor is a green coloured, cost effective, low silicate and phosphate based Type "B" coolant that protects against corrosion, cavitation, scaling and oxidation in vehicles that do not require an anti-freeze / anti-boil coolant. It is an effective water wetting agent that uses a conventional inhibitor to provide maximum protection against corrosion whilst providing superior heat transfer to significantly reduce engine operating temperature. Radiator Inhibitor is suitable for use in a wide range of vehicles including passenger cars, light commercial vehicles, motorcycles, trucks, buses, stationary engines and other equipment NOT requiring an Anti-Freeze / Anti-Boil coolant.



### PGXL COOLANT PREMIX

Penrite PGXL Coolant Premix is a blue coloured, heavy duty propylene glycol based, low silicate, phosphate and amine free hybrid engine coolant. PGXL Coolant Premix is designed for use in heavy commercial vehicles where it is formulated to provide excellent high temperature protection. It provides excellent long term corrosion protection for aluminium, cast iron, brass, copper, steel and solder. It is especially formulated for heavy vehicle application and the protection of heavy diesel wet sleeve liners. PGXL Coolant is premixed and does not require any further dilution. For initial fills, it requires no supplemental cooling additives. PGXL Coolant has a lower toxicity than either Mono Ethylene or Di-ethylene glycols but can be used to top up systems containing both OAT and conventional type coolants. We recommend that if a complete fill is required that the system be flushed prior to the introduction of the new coolant. It can be used in on road truck, off road mining, farm & marine applications. It will last 12,000 Hours or 1,000,000 km's or whichever comes first.



### HD LONGLIFE ECO1 ANTI-FREEZE, ANTI BOIL CONCENTRATE AND 50% PREMIX

A red coloured hybrid organic US style, heavy duty ethylene glycol based coolant concentrate that utilises a long drain, low depletion rate inhibitor system. Many engines where anti-freeze and/or anti-boil properties are required. This includes in trucks, buses, agricultural and construction equipment, stationary engines and in passenger cars/light commercial vehicles. It has particular suitability for heavy duty diesel engines of US origin but may be used in all types of vehicles that use red or orange coloured initial fill coolants. It is especially formulated for heavy vehicle application and the protection of heavy diesel wet sleeve liners. Penrite HD Longlife ECO1 Anti-Freeze Anti-Boil Concentrate is typically used at a 50% concentration rate but it will still provide protection at 33%. Meets the requirements of AS 2108-197 Type A and Caterpillar EC-1. Recommended maximum drain intervals in heavy duty applications are 8 years/1,250,000km on highway or 8 years/15,000 hours off highway whichever comes first. In passenger cars and light commercials the recommended drain interval, is 5 years/250,000km whichever comes first.



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Correct as at July 2014



# PENRITE

## INDUSTRIAL DIVISION



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