

A Better Class of Oil



## FORESTRY

#### AND RELATED INDUSTRIES

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"

#### **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**

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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

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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.

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#### **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

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 CEPSA lubricants, adding a large range of specialised industrial products to our armoury. CEPSA 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.

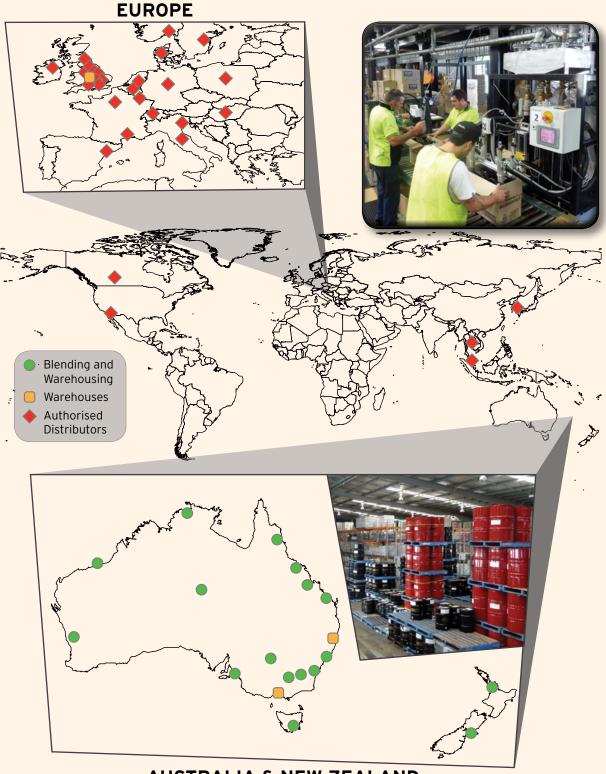
The Penrite Oil website is an invaluable resource for all customers and end users. It provides detailed information on the Penrite product range, a bulletin board for technical and industry updates, a user friendly recommendation guide, and a portal for the Penrite Top Class on-line ordering system.

#### 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.



**AUSTRALIA & NEW ZEALAND** 



A Better Class of Oil



# Product Information

#### Introduction

Over the years, Penrite has taken pride in having the right product for the right application. This also applies to the Forestry 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.

In the Forestry industry, there is also an increasing global requirement for products that are less harmful to the soil and the general environment. For this reason, Penrite have in their range some biodegradable products which are highlighted in green in the following pages. In addition, we have a low toxicity anti-freeze anti-boil based on propylene glycol, which is much kinder to the environment that ethylene glycol based products.

Some related industries include paper mills and wood products industries such as laminates and other wood products.

#### DIESEL ENGINE OILS

#### 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)

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#### 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 E0-0 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.

#### UNIVERSAL FARM OIL SAE 15W-40

A STOU (Super Tractor Oil Universal) oil suitable for engine, transmission and hydraulics of farm tractors. Can reduce squawk in wet brake/wet clutch applications where normal tractor fluids have proven ineffective. Key Specifications: 85W-90, API CG-4/SJ, GL-4, M2C 134C, JDM 27, MS1206, MF1141.





#### TRANSMISSION FLUIDS AND AUTOMOTIVE TYPE GEAR OILS

#### FLEET GEAR 10, 30 AND 50

Multipurpose transmission, hydraulic and final drive oils manufactured from highly refined mineral oils and selected additives to provide excellent performance in a wide range of heavy duty equipment in both on and off highway service.

FLEET GEAR 10 is recommended for use in Allison transmissions (except W series which must use Penrite Auto DX III) and in other transmissions that require SAE 10W engine oils. It is also ideally suited for hydraulic systems in equipment that require the use of ISO 32, ISO 46 or SAE 10W oils.

FLEET-GEAR 30 is recommended for use in all Caterpillar transmissions that require SAE 30 grades, Komatsu Powershift and Allison (except W Series) transmissions in severe service or high ambient conditions. It is ideal for use in transmissions that require API CD or CF/SAE 30 oils and in Caterpillar/Komatsu final drives that require SAE 30 grades.

FLEET-GEAR 50 is recommended for use in the final drives of Caterpillar equipment that specify this grade and in a wide range of manual transmissions that require CD50 engine oils and/or GL-190 to GL-3 90 gear oils. These include Dana-Spicer, Eaton Fuller (Roadranger) and Volvo.

#### TRACTOR TRANSMISSION AND HYDRAULIC OIL

Multipurpose tractor transmission fluid manufactured using highly refined base oils and an advanced additive package. It meets the requirements of Ford M2C-134D, Case Hytrans Plus, JD 20C/D and API GL-4 as well as many others. Penrite Tractor Transmission and Hydraulic Oil is designed for use in the transmissions, hydraulics, PTOs and some final drives of farm tractors and construction equipment, especially those utilising wet brake systems. Can be used as a hydraulic oil where ISO 68 grades are specified.

#### ATF DX3

Advanced technology, long-drain automatic transmission fluid meeting the requirements of DEXRON®-IIIH (released June 2003). It is manufactured from the latest additive technology and advanced hydrocracked base oils along with a European standard viscosity modifier to minimize shear loss. May be used is car and light truck automatic transmissions, heavy duty automatic transmissions, power steering units, rotary vane and screw type air compressors, hydraulic systems and manual transmissions where this type of fluid is specified.

#### GEAR OIL 80W-90, 85W-140 AND 140

Gear Oil 80W-90 are premium mineral automotive gear oil manufactured with modern extreme pressure additives and friction modifiers, meeting the requirements of API GL-5/6 and MT-1, as well as many other manufacturer specifications. They are designed for use in differentials, both hypoid and limited slip, manual gearboxes, transfer cases and transaxles in passenger cars, light commercials, 4WDs, trucks, construction, earthmoving and agricultural equipment. It provides a superior level of protection in heavy duty conditions including shock loads, preventing wear and maintaining the life of critical parts. The multi-purpose formulation allows greater flexibility while minimising inventory levels, especially for differential applications. Gear Oil 140 is particularly recommended in higher ambient conditions, or for guietening noisy differentials where the noise is due to wear, thus prolonging the life of the unit before rebuild is required. It provides a superior level of protection in heavy duty applications, where shock load conditions can be extreme.

#### HYDRAULIC AND CIRCULATING OILS

#### INDUS HV HYDRAULIC OIL RANGE

A range of premium quality, high viscosity index, ashless hydraulic oils made from selected hydrotreated 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).

#### HTO 32, 68 and 100

Penrite HTO are highly refined, thermally stable mineral oil-type heat transfer fluids formulated with premium hydrocracked base oils. Suitable for open or closed heat transfer systems with forced circulation operating under the following conditions:

- Maximum bulk oil temperature: 288°C
- Maximum film temperature on heater surfaces: 316°C
- Maximum temperature of oil surface in contact with air in open systems: 107°C
- Systems must have forced circulation of the heat transfer fluid.

Note for open systems: Due to oxidation which is increased in open systems due to exposure to oxygen, the life of any mineral oil in an open system declines rapidly at temperatures beyond the region of 100°C. Therefore, a reduced service life must be expected for these oils at higher temperatures in open systems.

#### **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.













#### INDUSTRIAL GEAR OILS AND OPEN GEAR LUBRICANTS

#### 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. Please contact your Penrite Representative for availability of ISO 150 and 320 grades.

#### **INDGEAR MP90**

Penrite Indgear MP90 is an SAE 90 mineral oil designed for use in a wide range of heavily loaded applications comprising varied gear sets, such as spur, helical and worm gears, as found in many types of industrial equipment. It meets the viscosity grade requirements of SAE 90/ISO VG 150 and API "GL-4 Plus". Indgear MP90 is recommended for all types of slow or high-speed, industrial systems where complex gear arrangements are in use and where a minimum DIN CLP classification or API GL-3 oils or higher are normally recommended. Ideal for use in industrial gearboxes used in web and sheet fed printing units and folders, high-speed roller bearings, stationary main drive gearboxes, crushers, hoists, conveyors, winches and machine tools. Further to the above applications, it can also be used to lubricate oil-immersed chain drives, sprockets, plain and anti-friction bearings.

#### **INDUS INDGEAR B**

Indus Indgear B oils are the ultimate premium performance borated mineral gear oils with syntheticlike heat resistance, formulated with a special, highly effective extreme pressure additive system. Indus Indgear B oils may be used in all types of slow or high speed industrial gear sets where API GL-3 oils are normally recommended and will not harm copper alloy components. Specially suitable for high temperature applications where conventional gear oils are unable to handle heat stresses. The high load carrying ability of the additive system allows the use of one ISO grade lighter than would normally be recommended. This, in combination with the advanced anti wear system provides reduced friction and heat loads, extended oil and equipment life as well as providing more efficient energy systems through less drag. They are acceptable as lubricants in and around food processing areas where there is no possibility of food contact (NSF H2 level). While contact with water should be avoided, Indus Indgear B oils will still provide excellent wear control in the presence of small amounts of water. Also suitable for use in heavy duty truck gearboxes and differentials where API GL-5 oils are required. Available in ISO Grades 220, 320 and 460 and meets the requirements of API GL-5.

#### 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 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 2-5 years 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.

## PERFEC

#### INDUS COMPRESSOR OIL 2KH SERIES Indus Compressor Oil 2KH series are a range

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 a gainst 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 <100°C, 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 200°C. 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 51526 VDL and DIN 51524 Part 1.

Products for use in refrigeration compressors and also diester fluids are also available on request, please contact your Penrite representative for details.

#### GREASES

#### 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 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.

#### **INDGREASE LCX 1100**

Penrite INDGREASE LCX 1100 is a lithium-calcium complex thickened lubricating grease based on a high viscous mineral oil. The grease contains antioxidants, corrosion inhibitors and EP/AW additives based on bismuth technology. It has good adhesion and mechanical stability even in presence of water and corrosive fluids. The specially extreme pressure and anti-wear package gives Indgrease LCX 1100 a very high load carrying capacity and hence provides excellent wear protection. It is an NLGI 2 grade. INDGREASE LCX 1100 is a high tech product specially designed for heavily loaded industrial applications. The product is the primary choice for applications where shock loads or severe water flushing can occur and is ideal for sugar mills. The thickener, together with the highly viscous base oil, make this product suitable for the lubrication of slow moving and heavily loaded bearings.

#### INDGREASE LITH EP O

Indgrease Lith EP O is an NLGI O, lithium based, mineral lubricating grease. It is made with a combination of antioxidants, corrosion inhibitors and Extreme Pressure (EP) and Anti Wear (AW) additives. Indgrease Lith EP O is a high quality multi-purpose, semi-fluid type grease for use in many types of automotive and industrial applications including heavy duty service where high loads are encountered. It is suitable for rolling element bearings, plain bearings, gears and couplings, where an NLGI O grease is required.

#### **INDGREASE LITH R3**

Penrite Indgrease Lith R3 is a high quality NLGI 3 consistency multi-purpose Rust & Oxidation (R&O) type, lithium soap thickened grease. It is designed as a multi-service grease for industrial applications, particularly high speed, low load bearing applications. It is made using highly refined base oils and features include a high level of oxidation, rust and water washout protection. Indgrease Lith R3 is recommended for use in most types of industrial applications operating under high speed, low load conditions. It is suitable for rolling element bearings, plain bearings, gears and couplings. Applications include electric motors, pumps, fans & generators. Because of its outstanding corrosion and water resistant properties it can be employed where water ingress is present. It is recommended for warm to hot ambient temperature applications. Recommended operating temperature range is from -20°C to 130°C.

#### **INDGREASE MOLY HT**

Indgrease Moly HT is a premium heavy duty, NLGI No. 2 grease designed for the mining industry. It is a smooth grey/black grease based on a lithium complex thickener. It is formulated with high quality base stocks combined with extreme pressure additives for maximum loading applications and anti-wear protection, molybdenum disulphide and other solids for boundary protection against the heaviest sliding and shock or impact loading conditions as well as effective rust, oxidation and corrosion inhibitors. It is also adhesive and cohesive and will resist "squeeze out" from surfaces requiring lubrication under load conditions. It provides lubricating protection for intermittent operation up to 200°C. Its excellent resistance to shear and high temperature operation enhances its performance and life. Indgrease Moly HT also has excellent water washout resistance and is suitable for applications where water contamination cannot be avoided, even at elevated temperatures. In this environment, it also gives protection against rust and corrosion. This advanced formulation makes it a high performing mining and heavy duty grease.

#### **Biodegradable Products**

#### CEPSA ARGA BIOGRASA 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 Please contact your Penrite representative regarding this product.











#### ENGINE COOLING SYSTEMS

HD LONGLIFE EC01 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 EC01 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.

#### 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.

#### HEAVY DUTY AFAB 50/50 PREMIX

Penrite Heavy Duty AFAB 50/50 is a ready-to-use, low silicate, green coloured premixed hybrid radiator coolant meeting AS 2108-2004 Type A and many other specifications. Penrite Heavy Duty AFAB 50/50 may be used in the cooling systems of most car, truck and bus engines where a conventional or hybrid type coolant has been specified. This includes in diesel engines with wet liners and also in agricultural and construction equipment. It may be used in cast iron, aluminium or alloy engines. The technology has been used and approved by European manufacturers as initial fill product or for their private labels and is compatible with other Penrite-branded cooling system products. Recommended maximum drain intervals in heavy duty applications are 2 years/240,000km on highway or 2 years/3,000 hours off highway whichever comes first. In passenger cars and light commercials the recommended drain interval, is 4 years /150,000km whichever comes first.

#### OTHER OILS AND FUEL ADDITIVES

#### ROCKSLIDE 68 AND 320

Penrite Rockslide oils are made from highly refined base oils and a careful selection of additives (including friction modifiers and anti-misting agents) to provide excellent lubrication performance in industrial air tools (Rock drill) and on slideways. They are available in ISO 68 and 320 grades. Rockslide 68 and 320 are designed for use on, slideways, tables, carriages, guides and as a tacky gear oil for industrial machine centre applications. Percussion type air tools operating in wet or dry conditions, jackhammers, rammers, riveting and chipping hammers and centralised lubricators of large crawler-mounted drill rigs. Guidelines for correct atomisation of air-line lubricators - Rockslide 68 - Up to 15°C and Rockslide 320 - Above 30°C. May also be used as industrial gear oils.

#### PENBLUE

Penrite Penblue is an aqueous solution of Urea, 32.5% in weight. (AdBlue<sup>®</sup>). SCR (Selective Catalytic Reduction) systems require a continuous provision of a solution of Urea at 32.5% in order to operate correctly. SCR technology has been developed to fulfil the requirements of emissions standards EURO 4 and EURO 5. AdBlue<sup>®</sup> is a NOX reducing agent designed to be used in diesel vehicles equipped with SCR technology. Penblue is added to a separate storage tank on the vehicle.











#### BRAKE FLUID SUPER DOT 4

Penrite Brake Fluid Super DOT 4 is a high quality, non-petroleum based, premium fully synthetic brake fluid designed for use in a wide range of brake and clutch applications where DOT 3, DOT 4 or Super DOT 4 products are called for. Recommended for re-fill or top-up of brake and clutch systems in passenger cars, light and heavy commercial vehicles, four wheel drives, tractors and motorcycles. Note this product should not be mixed with silicone DOT 5 fluids. For vehicles that require mineral based products, Penrite LHM Plus should be used. For best results, always flush system with Penrite Brake Fluid Super DOT 4 if using for the first time before refilling the system. Silicone type assembly compounds should not be used in conjunction with this product.

#### CHAIN SAW BAR OIL

Penrite Chain Saw Bar Oil is an ISO 100 tacky lubricant designed for use on the chain and bar of all types of chainsaws. The special additive system reduces wear of components and ensures blades remain sharp for longer periods.

#### **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.

#### **Biodegradable Products**

#### MC-2ST FULL SYNTHETIC TWO STROKE OIL

Penrite MC-2ST Full Synthetic Two Stroke Oil is the ultimate performance premium fully synthetic ester based two-stroke oil for maximum power and protection in motorcycle and other two cycle engines. It uses a new powerful, practically ashless clean burning high performance additive package for maximum lubricity and low piston deposits. All two stroke engines used in motorcycles on road or in competition, using either a premix or oil injection system. Also suitable for use in lawn mowers, chainsaws, and whipper snippers. MC-2ST Full Synthetic two Stroke Oil. Good for the environment, low smoke & Biodegradable. Meets API-TC, JASO FD, ISO EG-D, Piaggio, Hexagon (performance), Aprilia DiTechSR50 (performance).

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**PENRITE International Partner** 

Correct as at July 2014















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