

## Lubricant Solutions for Underground Hardrock Mining

**MOVING YOUR WORLD** 

## **About FUCHS**

FUCHS is a global brand with a German heritage that has developed, produced and sold lubricants and related specialties for more than 90 years. Comprising of 58 companies and more than 5,800 employees worldwide, the FUCHS Group is a leading independent supplier of lubricants.

The FUCHS product program comprises more than 10,000 products and related services across multiple categories including:

- Automotive Lubricants
- Industrial Lubricants
- Lubricating Greases
- Metal Processing Lubricants
- Food Processing Lubricants
- Special Application Lubricants; and
- Services

Along with its Sunshine (VIC) facility, FUCHS Lubricants (Australasia) Pty. Ltd. produces a selection of its products within its 25,000 square metre purpose built Beresfield (Newcastle, NSW) plant.

Keeping in line with its core values, both FUCHS facilities manufacture products using high-quality materials and cutting-edge technology whilst also adhering to industry leading environmental and manufacturing policies and requirements.

Working close with its customers, FUCHS develops holistic, innovative and custom-made solutions for a variety of applications.

And while that means the company is perfectly positioned to respond to the immediate needs of its customers - particularly in emergency situations - it also proudly means jobs for Australians.

As a lubricant manufacturer, FUCHS stands for performance, sustainability, safety, reliability and efficiency.

### FUCHS LUBRICANTS. MOVING YOUR WORLD.

Wayne Hoiles Regional Vice President India, Southeast Asia, Japan & South Korea

### **MOVING YOUR WORLD**

by offering a comprehensive list of lubricants, which meet or exceed all major manufacturers' performance requirements. That means, no matter what your workforce of machinery consists of, FUCHS has a specialist lubricant to protect and



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## German Technology, Australian Commitment.

**95%** of products sold in Australia and New Zealand are manufactured in Australia

**1700** lubricants and related specialties



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world class production plants and laboratories being the only Australian manufacturer to produce lubricants, coolants, greases and additives

FUCHS Lubricants (Australasia) Pty. Ltd. operate with SAI Global certified systems along with ISO IATF 16949 certification, focused on high quality outcomes & mitigation of risk.

E FUCHS





Environment ISO 14001

# **Engine Oils**

Hard-working engines in the mining industry require the very best in heavy duty engine oil technology. Constantly running at high load places extreme demand on the oil to ensure that engines run reliably and components are protected to provide maximum life span. In engine oils FUCHS is a pacesetter in continuous improvement for top performance. But it is not only reliability and innovation that count but what they provide.

TITAN high performance engine oils also ensure that operating costs are cut by reducing fuel and oil consumption and because they facilitate longer oil change intervals.

FUCHS. Your reliability and innovation partners. You can rely on us.

## PRODUCT FEATURE **TITAN CARGO** SAE 15W-40

TITAN CARGO SAE 15W-40 is a diesel engine oil designed for a large range of underground and surface mining machinery which meet the latest API category CK-4.

The combination of state-of-the-art additive technology with a new base oil matrix provides the highest levels of performance regarding oxidation stability, resistance to oil aeration, wear protection as well as shear stability in highly stressed engines.

TITAN CARGO SAE 15W-40 is particularly advantageous in Tier 4 engines and machines fitted with exhaust gas treatment systems such as Diesel Particulate Filters (DPF), Diesel Oxidation Catalyst (DOC), Exhaust Gas Recirculation (EGR) and Selective Catalytic Reduction catalyst (SCR) and/or any combination of the given technologies.

RECOMMENDATIONS

• MAN M 3575

• RENAULT RLD-4

### **SPECIFICATIONS**

• ACEA E9

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- API CK-4 / CJ-4 / SN
- CAT ECF-3
- JASO DH-2

### APPROVALS

- CUMMINS CES 20086
- DETROIT DIESEL 93K222
   DEUTZ DQC III-10 LA
- FORD M2C171-F1
- MACK EO-S 4.5
- MAN M 3775
- MB-APPROVAL 228.31
- MTU DDC TYPE 2.1
- RENAULT RLD-3
   VOLVO VDS-4.5
- ALLISON TES-439

### Performance Features

- Excellent oxidation stability
- Outstanding shear stability
- Protection of exhaust gas treatment systems due to very low sulphated ash content
- Excellent wear protection under high load conditions
- Protection against soot-related viscosity increase



## **ENGINE OILS**

### TITAN CARGO SAE 15W-40

Pack Sizes = 5L = 10L = 20L = 205L = 1000L = Bulk

TITAN CARGO SAE 15W-40 is a ultra high performance engine oil featuring a CK-4 specification which not only meet today's stringent emission requirements but also the engine performance of modern Original Equipment Manufacturers (OEMs)

The combination of state-of-the-art additive technology with a new base oil matrix with very high oxidation stability provides the highest levels of performance regarding engine durability in highly stressed commercial vehicle engines.

TITAN CARGO SAE 15W-40 has not only been developed to today's emission requirements, but it's particularly advantageous in vehicles fitted with exhaust gas treatment systems such as Diesel Particulate Filters (DPF), Diesel Oxidation Catalyst (DOC), high rate of Exhaust Gas Recirculation (EGR), two-stage turbo charging and SCR-Catalyst (Selective Catalytic Reduction) and/or any combination of the given technologies.

Recommendations

MAN M 3575

**RENAULT RLD-4** 

### Specifications

ΔCFΔ F9

- API CK-4 / CJ-4 / SN CAT ECF-3
- JASO DH-2
- DETROIT DIESEL 93K222 DEUTZ DQC III-10 LA

Approvals

- FORD M2C171-F1
  - MACK EO-S 4.5
  - MAN M 3775
  - MB-APPROVAL 228.31 MTU DDC TYPE 2.1

CUMMINS CES 20086

- **RENAULT RLD-3**
- VOLVO VDS-4.5
- ALLISON TES-439

### TITAN CARGO FLEX K4 10W40

Approvals

 DEUTZ DOC IV-18 LA

MB-APPROVAL 228.51 **RENAULT RLD-3** 

MACK EOS-4.5

VOLVO VDS 4.5

MAN M 3775

Pack Sizes = 5L = 20L = 205L = 1000L

TITAN CARGO FLEX K-4 10W-40 is a Premium Low-SAPS Long Drain engine oil for light and heavy-duty commercial vehicles, offering maximum fuel economy over the whole drain-interval due to its outstanding oxidation and ageing stability. TITAN CARGO FLEX K-4 10W-40 also supports optimum protection for the latest diesel particulate filters and catalysts, and due to minimum evaporation loss, the oil consumption and turbocharger deposits are significantly reduced.

**Specifications** 

- ACEA E11/E8/ E9/E7/E6
- API CK-4/CJ-4
- CAT ECF-3

#### Recommendations CUMMINS CES 20086

- DETROIT DIESEL 93K222
- JASO DH-2
- TITAN GT1 FLEX C23 5W-30

#### Pack Sizes = 51 = 71 = 101 = 201 = 2051 = 10001

TITAN GT1 FLEX C23 SAE 5W-30 is a premium engine oil for passenger and light commercial vehicles. With the combination of ACEA C2 and C3 and corresponding approvals TITAN GT1 FLEX C23 SAE 5W-30 offers a wide range of harmonisation opportunities across several European and Asian manufacturers. The product also is advantageous for modern down sizing engines and engines with start-stop systems as well as exhaust gas after treatment systems such as catalysts or particulate filters. TITAN GT1 FLEX C23 SAE 5W-30 allows more than double the fuel reduction compared to conventional ACEA C3-products of the same SAE-class.

**Specifications** 

- ACEA C2/C3 API SP
- Approvals BMW LONGLIFE-04 MB-APPROVAL 229.31 MB-APPROVAL 229.51 MB-APPROVAL 229.52
- OPEL OV 040 1547
- Recommendations CHRYSLER MS-11106 FIAT 9.55535-S1 / -S3 GM-LL-A-025
- GM-LL-B-025
- IVECO 18-1811 CLASSE SC1
- VW 505 00/505 01

# Gear Oils

The mining industry presents special demands and implications for driveline and enclosed gear applications. High load with rapid intermittent shock loading, always running, often reversing, these are highly stressed and critical components. Virtually every design type for the transmission of power is used in the diverse fleet of equipment used in surface and underground mining.

There is a FUCHS grade for nearly every type of gearbox or transmission application in the surface and underground mining industry e.g., heavy-duty manual and powershift transmissions; hoist, drag, propel and swing gearcases; final drives and axles.

These FUCHS oils were developed especially for the most advanced gearboxes and transmission designs. These high-performance gear and transmission oils meet the highest standards and specifications and ensure reliable, continuous operation ensuring low wear and low frictional loss. With their outstanding performance they can be used for almost any gearbox, particularly under extreme conditions.

The benefits are: outstanding high and low temperature properties and easy gear changing, the lowest possible degree of wear and tear and therefore the longest service life, extremely high pressure resistance and offering great reliability plus optimal corrosion protection.

## **GEAR OILS**

### TITAN SUPERGEAR GL-5 SAE 85W-140

Pack Sizes = 1L = 4L = 20L = 60L = 205L = 1000L

TITAN SUPERGEAR SAE 85W-140 is a mineral universal gear oil for use in manual transmissions and axle gearboxes in both passenger cars and commercial vehicles.

Sp	ecitio	catio	ns	
	API	GL-4	1	GL-5

Approvals ZF TE-ML 05A ZF TE-ML 12E ZF TE-ML 16D ZF TE-ML 21A

Recommendations MIL-L-2105 D VOLVO 97310

### TITAN SUPERGEAR SAE 80W-90

Pack Sizes = 4| = 20| = 60| = 205| = 1000|

TITAN SUPERGEAR SAE 80W-90 is a mineral universal gear oil for use in manual transmissions and axle gearboxes in both passenger cars and commercial vehicles.

Specifications API GI -4 / GI -5

Approvals MAN 342 TYPE M2 ZF TE-ML 05A ZF TE-ML 12E ZF TE-ML 17B ZF TE-ML 19B ZF TE-ML 21A

Recommendations MII -I -2105 D 

- NH 520 A
- STEYR B-101
- VOLVO 97310

**TITAN SUPERGEAR LS SAE 80W-90** 

Pack Sizes =4L =20L =60L =205L =1000L

TITAN SUPERGEAR LS SAE 80W-90 is a high performance LS (Limited Slip) hypoid gear oil for axles in commercial vehicles and passenger cars with or without limited slip differentials.

LS (Limited Slip) hypoid gear oil for highly stressed normal and limited slip differentials in cars, vans, trucks, buses, tractors, construction and industrial machinery. All-season, high performance, LS hypoid gear oil. Miscible with all mineral and synthetic gear oils. No flushing is therefore required.

### Specifications

- API GL-5 / GL-5 incl LS
- API MT-1 SAE J2360
- Approvals N/A

Recommendations

- -M2C197A MACK GO-J
- MERITOR 0-76D
- MIL-PRF-2105 E
- ZF TE ML-07 / ML-08

### **TITAN SUPERGEAR LS SAE 85W-140**

Pack Sizes =4L =20L =60L =205L =1000L

TITAN SUPERGEAR LS SAE 85W-140 is a lubricant for limited slip differentials and hypoid gears.

LS (Limited Slip) hypoid gear oil for highly stressed normal and limited slip differentials in cars, vans, trucks, buses, tractors, construction and industrial machinery. All-season, high performance, LS hypoid gear oil.

Specifications

API GL-5 / GL-5 LS API MT-1

SAE J2360

Approvals N/A

Recommendations 

- MACK GO-J
- MERITOR 0-76A MIL-PRF-2105 E
- ZF TE ML-07A / ML-08

## **GEAR OILS**

### TITAN SUPERGEAR HTB SAE 85W-140

Pack Sizes = 20L = 205L = 1000L

TITAN SUPERGEAR HTB SAE 85W-140 is a heavy duty hypoid gear oil containing a unique additive system for severe duty service in differentials and industrial gearboxes in the manufacturing, mining and related industries. Designed specifically to reduce thermal stress on equipment operating under high loads such as experienced in heavy-duty trucking and mining operations.

SpecificationsAPI GL-4 / GL-5

Approvals N/A Recommendations N/A

### **TITAN SUPERGEAR HYP 75W-90**

Pack Sizes =4L =20L =60L =205L =1000L

TITAN SUPERGEAR HYP SAE 75W-90 is suitable for use in highly-stressed axle gearboxes. In addition, the product is suitable for synchronized and unsynchronized manual transmissions, transfer cases and power take-offs for which oil according to API GL-5 is specified.

Specifications API GL-5 Approvals N/A Recommendations N/A

### **TITAN CYTRAC ETN 40**

Pack Sizes = 20L = 205L

TITAN CYTRAC ETN SAE 40 synthetic transmission lubricant is a specially formulated synthetic lubricant designed to improve fuel economy for extended drain and severe service heavy-duty manual transmissions, which require a non-EP gear or transmission lubricant.

SpecificationsAPI MT-1

- Approvals
- ConMetEaton PS-386
- MACK TO-A PLUS
- Navistar MPAPS B-6816 Type II
- Recommendations ARVIN MERITOR O-81
- Eaton PS-164 rev 7
- = Laton F3-104 lev /

### TITAN CYTRAC ETN-EP SAE 80W-140

Pack Sizes =4L =20L =205L

TITAN CYTRAC ETN-EP SAE 80W-140 is a heavy duty, extreme pressure API GL-5 gear lubricant compounded using a synthetic base stock, which has a high viscosity index and an exceptionally low pour point.

SpecificationsAPI MT-1. GL-5

Approvals Dana SHAE 429 Recommendations ARVIN MERITOR O-80, O-76-B

- INTERNATIONAL TMS 6816
- MACK GO-J
- SAF 12360
- MIL-PRF-2105 E

### **TITAN CYTRAC SL 75W-90**

Pack Sizes = 11 = 41 = 201 = 2051 = 10001

TITAN CYTRAC SL SAE 75W-90 is outstanding with many properties due to the combination of high quality fully synthetic base fluids and a very modern additive technology The good hightemperature stability of TITAN CYTRAC SL SAE 75W-90 and its ability of lowering the temperature in the gearbox makes extended oil-change intervals possible according to manufacturer's recommendations. TITAN CYTRAC SL SAE 75W90 has proven its capabilities in a field test over more than 600,000km.

Specifications API GL-5

- Approvals MAN 342 TYPE S1 SCANIA STO 1:0
- Recommendations
- JOHN DEERE JDM J11E
- JOHN DEERE JDM J11G
- MB 235.8
  - VOLVO 97312
- ZF TE-ML 05B, 07, 08, 12B, 16F, 17B

### **TITAN CYTRAC TD 75W-90**

Pack Sizes = 1L = 4L = 20L = 205L = 1000L

TITAN CYTRAC TD SAE 75W-90 is a Premium Performance multifunctional transmission and gear oil. Due to the modern additive technology of TITAN CYTRAC TD SAE 75W-90 it protects effectively against wear and corrosion. In combination with selected fully synthetic base oils this ensures very good oxidation stability. At the same time TITAN CYTRAC TD SAE 75W-90 offers good compatibility with elastomers and synchronizer materials. Furthermore, the excellent temperature-viscosity behaviour ensures the optimal function under all operating conditions.

### Specifications

API GL-4/GL-5 

- API MT-1
- SAE J2360
- Approvals
- DETROIT DIESEL 93K219.01
- MAN 341 TYPE Z2 MAN 342 TYPE M3 / MAN 342 TYPE S1
- MB-APPROVAL 235.8
- MERITOR O-76-E
- SCANIA STO 1:0 / SCANIA STO 1:1 G
- SCANIA STO 2:0A FS
- VOLVO 97312
- ZF TE-ML 02B, 05A, 12L, 12N, 16F, 17B, 19C, 21A (ZF003341)

#### Recommendations JOHN DEERE JDM J11E

- JOHN DEERE JDM J11G
- MB 235.8
- VOLVO 97312
- ZF TE-ML 05B, 07, 08, 12B, 16F, 17B

## **GEAR OILS - INDUSTRIAL**

Approvals

### **RENOLIN CLP SERIES**

**RENOLIN CLP 68 RENOLIN CLP 100 RENOLIN CLP 150 RENOLIN CLP 220 RENOLIN CLP 320 RENOLIN CLP 460 RENOLIN CLP 680** 

Pack Sizes = 201 = 2051 = 10001 Pack Sizes = 20L = 205L = 1000L Pack Sizes = 20L = 205L = 1000L Pack Sizes = 10L=20L = 205L = 1000L Pack Sizes = 10L=20L = 205L = 1000L Pack Sizes = 10L=20L = 205L = 1000L Pack Sizes = 20L = 205L = 1000L

The RENOLIN CLP Series of gear oils contain carefully selected base oil and matched additives to protect machinery from undue wear in especially critical boundary friction conditions. RENOLIN CLP products fulfill and in many cases exceed all CLP lubricating oil requirements as defined in DIN 51 517-3 and ISO 6743-6.

Recommendations

Ask your FUCHS Sales Representative

### Specifications

- DIN 51 517-3 (2011): CLP
- ISO 6743-6: CKC/CKD ISO 12925-1: CKC/CKD
- AIST 224
- AGMA 9005/E02:EP David Brown S1 53.101

### RENOLIN CLP PLUS SERIES

### **RENOLIN CLP 220 PLUS RENOLIN CLP 320 PLUS RENOLIN CLP 460 PLUS**

Pack Sizes = 205L = 1000L Pack Sizes = 20L = 205L Pack Sizes = 20L

Pack Sizes = 20L = 205L = 1000L

RENOLIN CLP Plus series of oils are proven, special mineral oil-based gear oils with friction-reducing and detergent additives. They provide outstanding ageing stability, good protection against micro-pitting and extended oil change intervals are possible. RENOLIN CLP PLUS products are used for all applications in industry where a detergent / dispersant oil of the CLP type is recommended

Specifications

- DIN 51 517-3: CLP ISO 6743-6 & ISO 12925-1:CKC/CKD
- AGMA 9005/E02:EP
- Approvals Ask your FUCHS Sales Representative

Ask your FUCHS Sales Representative

Recommendations Ask your FUCHS Sales Representative

### RENOLIN UNISYN CLP SERIES

**RENOLIN UNISYN CLP 150 RENOLIN UNISYN CLP 150 (ORANGE) RENOLIN UNISYN CLP 220 RENOLIN UNISYN CLP 220 (RED) RENOLIN UNISYN CLP 320 RENOLIN UNISYN CLP 320 (BLUE) RENOLIN UNSIYN CLP 460 RENOLIN UNISYN CLP 680** 

The RENOLIN UNISYN CLP Series are Fully Synthetic Polyalphaolefin High Performance EP/AW Industrial Gear and Lubricating Oils.

Approvals

Designed for use in industrial gearboxes and general lubrication systems subject to high temperatures, RENOLIN UNISYN CLP Series oils are fully synthetic lubricants based on polyalphaolefins. RENOLIN UNISYN CLP Series oils lower friction and reduce wear. Furthermore, these oils increase the efficiency of machine components. Polyalphaolefins, and thus RENOLIN UNISYN CLP Series oils, are miscible and compatible with mineral oils at all ratios and can be disposed of as such. The compatibility of polyalphaolefins with common machinery materials, seals and paint finishes is comparable with that of mineral oils. Changing-over to RENOLIN UNISYN CLP Series is therefore very simple and requires no prior flushing. Depending on the application, a number or viscosity grades can be satisfied by a single RENOLIN UNISYN CLP Series oil. This allows users to rationalise stocks and cut costs. RENOLIN UNISYN CLP Series oils can be classified as CLP (DIN 51 517-3) and CKC (ISO 6743-6) lubricating oils.

Ask your FUCHS Sales

Representative

### **Specifications**

- DIN 51 517-3: CLP ISO 6743-6 & ISO 12925-1: CKC/CKD/CKE
- AGMA 9005/E02:EP
- **AIST 224**
- David Brown S1 53.101
- FAG Requirements: FAG-FE8-Test: stage 1-4 pass
- SKF requirements: pass (100°C-test)

FOR CONFIRMATION OF SUITABILITY, PLEASE REFER TO THE FUCHS NET LUBE APP, FUCHS WEBSITE AND/OR CONTACT YOUR FUCHS SALES REPRESENTATIVE

Recommendations

Ask your FUCHS Sales Representative

### **PRODUCT FEATURE**

## **AGRIFARM UTTO MP**

AGRIFARM UTTO MP is a Super high-performance oil (UTTO/MFO) for use in transmission and hydraulic systems with integrated wet brakes, clutches and differentials. AGRIFARM UTTO MP is suitable for agricultural and construction machinery and is based on a careful selection of base oils and additive technology which guarantees excellent wear protection, good viscosity and temperature behaviour and best friction properties.

AGRIFARM UTTO MP's special additive components guarantee outstanding deceleration performance combined with a high capability of noise suppression over the full oil drain. Also gearboxes or combined gearbox-hydraulic-systems of agricultural and construction machinery with fill instructions HD-engine oil SAE 10W-30 or gear oils SAE 75W-80 acc. to API GL-4 can be filled using AGRIFARM UTTO MP alternatively. All machines with accessory equipment drives should be switched to AGRIFARM UTTO MP consistently to utilise the maximum rationalisation benefit. AGRIFARM UTTO MP is miscible and compatible with conventional branded gear oils. However, mixing with other gear oils should be avoided in order to fully utilise the product's benefits. A complete oil change is recommended when converting to AGRIFARM UTTO MP.

• API GL-4

### APPROVALS

- ZF TE-ML 03E, 06L, 05F, 17E, 21F (ZF002183)
- DANA-OHTM-U
  VOLVO WB 101





### Performance Features

- Excellent protection against friction and wear
- Excellent anti-corrosion protection
- Reduces brake chattering and squeaking
- Excellent seal compatibility
- Optimal hightemperature viscosity control

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THE ALLER

## **GEAR OILS - UTTO**

### AGRIFARM UTTO MP

Pack Sizes = 5L = 20L = 21L = 205L = 1000L

AGRIFARM UTTO MP is a super high performance multi-functional oil (UTTO/MFO) for use in transmission and hydraulic systems with integrated wet brakes, clutches and differentials for agricultural and construction machinery.

AGRIFARM UTTO MP's special additive components guarantee outstanding deceleration performance combined with a high capability of noise suppression over the full oil drain.

<ul><li>Specifications</li><li>API GL-4</li></ul>	Approvals ZF TE-ML 03E, 06K, 05F, 17E, 21F (ZF002183) DANA-OHTM-UTTO 22G-0012 VOLVO WB 101	Recommendations           AGCO Powerfluid 821 XL           AGCO Q-186 (Whitefarm)           ALLISON C-4           CASE MS 1230, 1210, 1209, 1207,1206           CLAAS / LANDINI / SAME-Transmission           CNH MAT 3505, 3506, 3509, 3525, 3526, 3540           FNHA-2-C-200.00 / -201.00           FORD M2C48-C3, ESN M2C86-B/C, M2C134-D           JOHN DEERE JDM J20C           KUBOTA UDT FLUID           MASSEY FERGUSON CMS M 1145, 1143,1141, 1135           NH 410B           SAE J300 10W-30           SAE J306: 75W-80           SDFG OT 1891 A           VALTRA G2-08, G2-B10
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### **TITAN UTTO TO-4 SERIES**

 TITAN UTTO TO-4 10W
 Pack Sizes = 20L=205L = 1000L

 TITAN UTTO TO-4 10W D (Blue)
 Pack Sizes = 20L=205L = 1000L

 TITAN UTTO TO-4 30
 Pack Sizes = 20L=205L = 1000L

 TITAN UTTO TO-4 30 D (Orange)
 Pack Sizes = 20L=205L = 1000L

 TITAN UTTO TO-4 30 D (Orange)
 Pack Sizes = 20L=205L = 1000L

 TITAN UTTO TO-4 50
 Pack Sizes = 20L=205L = 1000L

 TITAN UTTO TO-4 60
 Pack Sizes = 20L=205L = 1000L

TITAN UTTO TO-4 (SAE 10W, 30, 50, 60) are super high performance multi-functional oils which have been specially designed to meet the rigorous requirements of the CATERPILLAR TO-4 specification.

Specifications API GL-4 CATERPILLAR TO-4	Approvals N/A	Recommendations KOMATSU KES 07.868.1
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### **TITAN UTTO PRO 102**

Pack Sizes = 20L=205L = 1000L

TITAN UTTO PRO 102 is a Premium Performance Multifunctional Oil, which is officially approved according to the latest VOLVO Construction Equipment specification WB 102. It offers greater wear protection, excellent viscosity-temperature behavior, is highly thermally resistant, oxidation and shear stable.

Specifications API GL-4 SAE J 306: 75W-75	Approvals VOLVO WB 102	Recommendations ALLISON C-4 CASE MS 1207/1209/1210 CATERPILLAR TO-2 FORD ESN-M2C134-D FORD M2C86-C JOHN DEERE JDM J20C JOHN DEERE JDM J20D KOMATSU AXO 80 (KES 07.866) KUBOTA UDT FLUID MASSEY FURGUSON CMS M 1145, 1143,1135 SAE J300: 0W-20 VOLVO WB 101
		ZF TE-ML 03E, 05F, 06K, 17E, 21F

LUBRICANTS. TECHNOLOGY. PEOPLE.



## Supporting the Mining Industry

FUCHS has almost 100 years experience providing the highest quality lubricant solutions to the mining industry. We claim technological leadership in strategically important fields of application. Our dedicated team of partners with our customers to provide wholistic solutions, which extract maximum value from the use of our lubricants.

### Value Add Program Features

Our industry specific Value Add program is tailored to our customers needs. Customers are able to select from a range of services and activities that maximise the value generated by the use of our lubrication products by optimizing the lifecycle of the product, from supply chain, through storage and handling phases, to application and end of life disposal or recycling. Our service package is designed to assist customers to optimize all facets of lubricant use on the mine site, from lubricant storage and handling, fixed and mobile plant, used oil analysis and training.

### Telemetry + Vendor Management

FUCHS will manage your site bulk inventory. Tank telemetry gives us real time visibility of ullage and bulk tankers are scheduled from our regional depots. Your site inventory officers only need to process the delivery paperwork.

Our team of Sales Managers also take packaged goods stock counts, to ensure optimized inventory levels and assist your inventory officers in raising orders for replenishment.

Our exchange grease bins and fluid containers are fitted with GPS tracking, so their whereabouts can be monitored and deliveries tracked in real time.

### Lube Survey

FUCHS provides detailed lubricant surveys. We assess handling and storage practices and provide a comprehensive report of improvement opportunities.

This service includes monitoring Solcenic mixing stations for correct operation and concentration, and fluid cleanliness.

### **Fixed Plant**

The Fuchs Open Gear Division supports your critical path, fixed plant rotating equipment with our world renowned CEPLATTYN Open Gear Lubricants, expert technical services and specialised lubricant systems to ensure maximum protection, performance and longevity.

The Open Gear Division are trade qualified specialist technicians, they function as a trusted partner with your own maintenance department and provide extensive inspection, comprehensive reporting as well as world class industry know how and solutions ensuring proactive maintenance and minimum equipment downtime.

### **CENT Used Oil Analysis**

Our fully equipped condition monitoring and quality control laboratories at Beresfield and Sunshine provide analyses such as: Fluid and grease condition analysis, standard schedule and specialized testing, product trial monitoring and capability analysis.

### Fuchs Training Services

FUCHS Mining's dedicated Trainer and Assessor provides a broad range of training modules to your personnel, including warehousing, maintenance, planning and engineering. Sessions are available face to face or via Telecon.

## **TRANSMISSION OILS**

### **TITAN ATF 4400**

Pack Sizes = 1L = 4L = 20L = 60L = 205L = 1000L

TITAN ATF 4400 has been developed especially to suit the special demands of modern Japanese step-type automatic transmissions with hydraulic converters used in many passenger cars and light duty vehicles. TITAN ATF 4400 combines excellent anti-shudder-properties with a high friction-level constant over lifetime. For this profile selected high-quality base-stocks have been combined with a specially developed additive technology.

Specifications	Approvals	Recommendations
JASO M315 TYPE 1A	<ul> <li>N/A</li> </ul>	BMW MINI 83 22 0 402 413/83 22 7 542 290
		CHRYSLER MS7176E/9602 (ATF +3/+4
		DAIHATSU ALUMIX ATF MULTI
		DEXRON <sup>®</sup> III
		FIAT 9.55550-AV1/AV4
		FORD M2C924-A/M2C922-A1
		<ul> <li>FORD MERCON<sup>®</sup></li> </ul>
		<ul> <li>GM 9986195</li> </ul>
		HONDA ATF Z-I
		<ul> <li>HYUNDAI SP III</li> </ul>
		ISUZU BESCO ATF-II/ATF-III
		<ul> <li>JATCO 3100 PL085/FWD (N402)/JF506E (K17)</li> </ul>
		<ul> <li>JWS 3309/TYPE T-IV</li> </ul>
		MAZDA ATF D-III/ATF M-3/M-V
		<ul> <li>MITSUBISHI SP-II/-III</li> </ul>
		<ul> <li>NISSAN MATIC C/D/J</li> </ul>
		<ul> <li>SAAB 3309</li> </ul>
		SUBARU ATF OIL/ATF OIL SPECIAL/ATF HP
		SUZUKI ATF 3309/3317
		TOYOTA TYPE D-2/T/T-II/T-III/T-IV
		VW G 052 990/055 025

### TITAN ATF 5500

Pack Sizes =4L =20L =205L

TITAN ATF 5500 has been designed based on selected high-quality base oils and a specially developed additive technology. It is highly thermally durable, offers extreme oxidation stability and offers also a reliable performance at very low temperatures. TITAN ATF 5500 is applicable in many applications in passenger cars as well as light and heavy duty.

### Specifications

N/A

#### Approvals • MAN 339 TYPE V1/V2/Z3/Z12

- MB-APPROVAL 236.9
- VOITH 150.014524
- VOLVO 97341
- ZF TE-ML 04D, 14C, 16M, 16S, 20C, 25C (ZF001797)

### Recommendations

- ALLISON TES 295, 389
- DEXRON® III (H)
- MAN 339 TYPE Z4

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### TITAN ATF 6400

Specifications

JASO M315 TYPE 1A-LV

Pack Sizes =4L =20L =60L =205L

Premium Performance ATF with reduced viscosity specifically formulated for automatic transmissions of Japanese and American manufacturers.

TITAN ATF 6400 has been specially designed to deliver performance and increased fuel efficiency for modern automatic transmissions of Japanese and American manufacturers where reduced viscosity is required.

TITAN ATF 6400 has been specially designed to deliver performance and increased fuel efficiency for modern automatic transmissions of Japanese and American manufacturers where reduced viscosity is required and meets the stringent DEXRON®-VI and MERCON LV specifications.

Approvals	Re	commendations
DEXRON <sup>®</sup> VI	-	AISIN WARNER/AW-1
FORD MERCON LV	-	BMW 81 22 9 400 272
ZF TE-ML 09	•	BMW 81 22 9 400 275
	•	BMW 81 22 9 407 738
	•	BMW 83 22 0 397 114
	•	BMW 83 22 0 403 248
		BMW 83 22 0 403 249
	•	BMW 83 22 0 432 807
	•	BMW 83 22 2 167 718
		BMW 83 22 9 407 858
		BMW 83 22 9 407 859
		FIAT 9.55550-AV2
	-	GM 9256039/88863400
		HONDA DW-1
		HYUNDAI NWS 9638
		HYUNDAI SP IV
		JWS 3324
		KIA SP-IV
		MITSUBISHI DIA QUEEN ATF-MA1
	-	NISSAN MATIC S
	•	TOYOTA TYPE WS
	-	VW G 055 540 A2

### **TITAN ATF D3**

N/A

Pack Sizes = 1L = 4L = 20L = 60L = 205L = 1000L

TITAN ATF D3 is a multi-functional Automatic Transmission Fluid, providing longer life and smoother gear shifts. Recommended for Passenger Cars and Commercial Vehicles requiring a Dexron® III specification.



# Hydraulic Fuids

Hydraulic Oils are a crucial contributor to the efficiency and productivity of surface and underground mining operations. These hydraulic systems are always running at high load and often operate at full capacity (low tank volume, high circulation rates, high pressure) and potentially in very hot or very cold environments. In other words, today's hydraulic oils are a more critical component than ever. Standard hydraulic oils cannot reliably meet the requirements placed upon them in all instances.

Therefore FUCHS offers a full range of hydraulic oils to meet the specific requirements of our customers operations. From premium performance mineral oils to special synthetics we have your hydraulic oil needs covered.

The demand for lower fuel consumption and the associated reduction of emissions, while maintaining the same level of performance, can now only be met by using special hydraulic oils. Fuel economy and energy saving are becoming more and more important. In the light of this, and in order to meet the special demands of a heavy machinery manufacturer, we have developed specialty hydraulic oil that significantly reduces fuel consumption while at the same time offering high efficiency and longer service life. Less maintenance and lower failure related downtime as well as a broader operating temperature range make a significantly reduction in operating costs.

You can benefit from our experience, too!

## **HYDRAULIC FLUIDS**

### **RENOLIN B PLUS SERIES**

RENOLIN B 32 PLUS RENOLIN B 46 PLUS RENOLIN B 68 PLUS RENOLIN B 68 D (HPI) RENOLIN B 100 PLUS RENOLIN B 100 PLUS D (BLUE)

Pack Sizes =5L =20L =205L =1000L Pack Sizes =5L =20L =205L =1000L Pack Sizes =5L =10L =20L =205 =1000L =Bulk Pack Sizes =5L =10L =20L =205 =1000L =Bulk Pack Sizes =5L =20L =205L =1000L Pack Sizes =5L =20L =205L =1000L

The RENOLIN B PLUS series is a premium series of hydraulic oils for use in a wide range of hydraulic systems.

The RENOLIN B PLUS series of hydraulic oils are based on highly ageing resistant solvent raffinates and superior additives provide improved ageing resistance, corrosion protection and wear protection, fulfilling, in many cases even surpassing, the minimum requirements of HLP hydraulic oils.

#### Specifications

- DIN 51524-2: HLP
- Cincinnati Milacron P-68, P-69, P-70
- US Steel 126, 127
- Denison HF-1, HF-2, HF-0
- Racine, variable volume vane pumps
- Ford M-6C32
- Vickers I 286-S, M 2950-S

### **RENOLIN B HVI PLUS SERIES**

RENOLIN B HVI 32 PLUS RENOLIN B HVI 46 PLUS RENOLIN B HVI 68 PLUS RENOLIN B HVI 100 PLUS Pack Sizes =5L =20L =205 =1000L Pack Sizes =5L =20L =205 =1000L =Bulk Pack Sizes =20L =205 =1000L =Bulk Pack Sizes =20L

The RENOLIN B HVI PLUS series is a premium, high performance hydraulic oil series with a high viscosity index that reduces energy consumption.

The RENOLIN B HVI PLUS series has excellent viscosity – temperature behaviour guarantees a stable, protective film is formed between moving surfaces, even in harsh operating conditions, allowing for smooth efficient actuation over broad temperature ranges and high load demands, resulting improved system performance and reduced energy consumption over standard hydraulic oils.

Specifications

- DIN 51 524-3 : HVLP
- ISO 6743-4
- Denison HFO
- Bosch RexrothVickers
- US Steel
- Cincinnati Milacron

### **RENOLIN ZAF SERIES**

RENOLIN ZAF 5 RENOLIN ZAF 10 RENOLIN ZAF 22 RENOLIN ZAF 32 RENOLIN ZAF 46 RENOLIN ZAF 68 RENOLIN ZAF 100 Pack Sizes =20L Pack Sizes =20L =205 Pack Sizes =20L =205 =1000L Pack Sizes =20L =205 Pack Sizes =20L =205 Pack Sizes =20L =205 =1000L Pack Sizes =20L =205 =1000L

The RENOLIN ZAF series is a premium zinc and ash free hydraulic oil. The use of a zinc-free hydraulic/light lubricating oil is a requirement in many applications, especially where there is risk where the hydraulic fluid/ lubrication oil could be cross contaminated with metalworking fluids. RENOLIN ZAF Series offer excellent water separation, and its Zinc and Ash free formulation provides excellent wear and corrosion protection, oxidation stability and good resistance to ageing, and seal compatibility.

 Specifications
 Approvals
 Recommendations

 DIN 51 524-2 : HLP
 N/A
 N/A

## HYDRAULIC FLUIDS

### **RENOLIN ZAF HVI SERIES**

### RENOLIN ZAF HVI 46 RENOLIN ZAF HVI 68

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Pack Sizes = 20L = 205 = 1000L Pack Sizes = 20L = 205 = 1000L

RENOLIN ZAF HVI is a high performance long-life hydraulic fluid formulated with the latest ash free additive technology and the highest quality base oils ensuring a stable viscosity, catered to deal with severe mechanical stress at a wide range of temperatures. RENOLIN ZAF HVI has a naturally high resistance to the creation of sludge build up and the acidic by products formed in the presence of air and water. This property reduces the incidence of filter blockage and minimises the possibility of damage due to pump cavitation. RENOLIN ZAF HVI possesses an impressive demulsibility characteristic that ensures rapid oil separation from any water that might enter the system. Working in conjunction with advanced hydrolytic stabilisers, harmful contaminants introduced via water contamination are swiftly neutralised. RENOLIN ZAF HVI series show excellent copper compatibility and good yellow metal corrosion protection. The corrosion protection properties show excellent results in standard test condition as well as in humid test conditions.

### Specifications

- Cincinnati Milacron P68, P69, P70
- Vickers I 286-S, M 2950-S
- ISO 6743-4: HV
- ISO 6743-4: HM
- DIN 51 524-2: HLP
- DIN 51524-3: HVLP
- Bosch Rexroth
- Denison HF-1, HF-2, HF-0
- DBL 6713: HLP, HVLP

### UNILUBE

UNILUBE 46 UNILUBE 68 Pack Sizes = 20L = 200L = 1000L Pack Sizes = 20L = 200L = 205L = 1000L

UNILUBE hydraulic oils are an anti-wear hydraulic oils formulated with a blend of high-quality conventional base stocks. It is recommended for use in a wide variety of industrial, mobile and mining hydraulic system applications.

UNILUBE 68 is formulated to provide excellent wear protection for hydraulic systems by protecting it against rust, wear and corrosion. It has good demulsification properties to minimize the formation of emulsions.

Specifications

- DENISON HF-0
- Bosch Rexroth RDE 90235
   ISO 6743-4: HM
- ISO 6743-4: HM
   DIN 51524-2: HLP
- Vickers vane pump
- Cincinnati Milacron P-68, P-69, P-70

### **RENOSAFE FIREPROTECT**

### **RENOSAFE FIREPROTECT 46**

Pack Sizes = 20L = 205L = 1000L

RENOSAFE FireProtect products are fire resistant hydraulic fluids based on special synthetic esters. The selected organic ester base oils have highest purity and show high oxidation hydrolytic and thermal stability. The properties of the fluids are improved by the addition of special selected zinc and ash-free additive systems. These zinc and ash-free additive systems are based on new additive technology which guarantees excellent copper compatibility, yellow metal compatibility, excellent hydrolytic stability and highest oxidation stability. The RENOSAFE FireProtect products are non-toxic and physiologically harmless. The products of the RENOSAFE FireProtect series show in comparison to mineral based hydraulic fluids higher flammability temperature and higher self-ignition temperature. Special flammability tests according to ISO 12922 demonstrate that RENOSAFE FireProtect products reduce the risk of violent explosion or flammability when the fluids come in contact with open flames or hot metal surfaces (in comparison with mineral based products).

Specifications ISO 12922 DIN 51502

HEES 46 ISO 15380

## **PRODUCT FEATURE**

## RENOSAFE FIREPROTECT

RENOSAFE FireProtect products are fire resistant hydraulic fluids based on special synthetic esters. The selected organic ester base oils have highest purity and show high oxidation hydrolytic and thermal stability. The properties of the fluids are improved by the addition of special selected zinc and ash-free additive systems. These zinc and ash-free additive systems are based on new additive technology which guarantees excellent copper compatibility, yellow metal compatibility, excellent hydrolytic stability and highest oxidation stability. They contain very effective robust and stable wear protection additives together with extreme pressure components.

The RENOSAFE FireProtect products are non-toxic and physiologically harmless. The products of the RENOSAFE FireProtect series show in comparison to mineral based hydraulic fluids higher flammability temperature and higher self-ignition temperature. Special flammability tests according to ISO 12922 demonstrate that RENOSAFE FireProtect products reduce the risk of violent explosion or flammability when the fluids come in contact with open flames or hot metal surfaces (in comparison with mineral based products).

**SPECIFICATIONS**ISO 12922
DIN 51502
HES 46 ISO 15380



### Performance Features

- Excellent resistance to ageing and oxidation
- Non-toxic and free of heavy metals
- High shear stable viscosity index
- Rapid air release, low foaming behaviour
- Excellent wear protection properties, high scuffing load characteristics

# Rockdrill Lubricants

FUCHS lubricants provide exceptional performance and reliability for rock drilling operations, ensuring both efficiency and equipment longevity. These high-quality lubricants are specifically designed to meet the demanding conditions of rock drilling, where extreme pressures, high temperatures, and heavy loads are common. By reducing friction and wear on drill components, FUCHS lubricants minimise downtime and extend the service life of critical equipment, leading to significant cost savings over time. Their advanced formulations also enhance energy efficiency, helping equipment operate smoothly even under harsh conditions, while maintaining optimal productivity.

## **ROCKDRILL LUBRICANTS**

### **ROCKDRILL SERIES**

ROCKDRILL 150 ROCKDRILL 320 Pack Sizes = 10L = 20L = 205L = 1000L Pack Sizes = 5L = 10L = 20L = 205L = 1000L

ROCKDRILL is a range of mineral oil based products compounded with extreme pressure, anti-rust, anti-wear and anti-fogging additives to provide high film strength oils to lubricate all moving surfaces.

ROCKDRILL lubricants contain, as a first and unique feature in the drilling industry, additives designed to substantially reduce failure of drill bits due to the impact of humidity and high operating pressures causing seizure. ROCKDRILL oils are available in ISO viscosity grades 150 and 460.

### ROCKDRILL MA (MOLY)

ROCKDRILL MA 150 ROCKDRILL MA 320 Pack Sizes = 1000L Pack Sizes = 20L = 1000L

ROCKDRILL MA oils are specially formulated to lubricate the rotation gears on hydraulically powered machines and pneumatically powered rock drilling machines.

ROCKDRILL MA is recommended for use in large pneumatic hammers in demanding applications.

# Greases

The importance of choosing the right lubricating grease or multi-service open gear lubricant must never be underestimated. These lubricants are integral components of heavy machinery, particularly for surface and underground mining applications.

To ensure everything runs smoothly. Protect your investment with FUCHS.

## **PRODUCT FEATURE**

## RENOLIT CXS GSM RANGE

The range of RENOLIT CXS GSM greases was developed to allow for a reduction in the number of greases used on site whilst offering no performance reduction vs the OEM recommended products. With the successful trials in Australia, the product has proven to be a reliable performer.

### **CXS GSM BENEFITS**

- Ability to rationalise products across a wide variety of OEM's
- Ability to provide emergency running lubrication
- An optimised formulation allows for the highest level of wear protection
- No lubricant related failures have occurred since the introduction of these products
- Acceptance by all major mining OEM's
- Excellent pumpability in real world applications

Nearly two years ago we upgraded our FUCHS lubricant to RENOLIT CXS GSM and to date it is performing as expected and we have not seen any issues. For us one of the key inputs from the FUCHS team was the research and information that they brought to use from the OEM to say that it was acceptable. We had a small hurdle with one OEM but again the team from FUCHS aligned with them and we got a final sign off; I believe this has been a win/win for all involved.

Maintenance Superintendent, Open Cut Coal Mine in the Hunter Valley Australia

## **SOLID CONTAINING GREASES**

### **RENOLIT CXS GSM SERIES**

RENOLIT CXS GSM/H RENOLIT CXS GSM/S RENOLIT CXS GSM/D Pack Sizes =450g =20kg =180kg =1440L =Bulk Pack Sizes =450g =20kg =180kg =1260L =Bulk Pack Sizes =20L =180kg =Bulk

High-performance calcium sulfonate complex thickened grease formulated with 100% virgin base oils, an optimized extreme pressure/ anti-wear additive system, corrosion/oxidation additive package and fortified with a synergistic solids additive system for maximum protection in heavily loaded/shock loaded applications. This blend of solid additives provides for improved performance over straight 5% Molybdenum Disulfide (MoS2) grease alone.

### **RENOLIT MCE 460 EP 2**

Pack Sizes =450g =20kg =180kg

RENOLIT MCE 460 EP 2 is an innovative grease designed for a wide variety of mining, construction and earthmoving applications.

It offers a high level of wear and corrosion protection and utilizes unconventional black solids to provide a high level of wear protection at a competitive price.

### **RENOLIT LIM 460-2**

Pack Sizes = 450g = 20kg = 55kg = 180kg

RENOLIT LIM 460-2 is high performance grease, manufactured in Australia which has been developed using a market proven thickener technology and performance package. It meets a wide variety of OEM performance requirements in surface and underground mining, construction, civil and earthmoving applications.

### **RENOLIT LUBRENE LMG 960 EP 2**

Pack Sizes =450g =20kg =180kg =1260kg =Bulk

RENOLIT LUBRENE LMG 960 EP 2 is a high performance, semi-synthetic mining grease.

RENOLIT LUBRENE LMG 960 EP 2 exhibits excellent anti-wear and load carrying capacity. It is recommended for the lubrication of slow speed anti-friction bearings, pin and bushes, universal joints, axles etc.

## **MULTIPURPOSE GREASES**

### **RENOLIT XTB 2**

Pack Sizes =450g =500g =2.5kg =20kg =55kg =180kg

RENOLIT XTB 2 is suitable for a variety of automotive applications, including wheel bearing and general chassis lubrication.

RENOLIT XTB 2 is a blue coloured lithium complex grease which has been formulated to provide improved oxidation, wear protection and corrosion resistance compared to conventional greases.

### **RENOLIT GT PLEX 2**

Pack Sizes = 450g = 20kg = 180kg

RENOLIT GT-PLEX 2 is a high performance multi-purpose grease. It has been designed for high temperature applications and to stay in place and resist water wash out. RENOLIT GT-PLEX is orange in color for easy identification and will resist squeeze-out whilst also preventing wear and corrosion. Due to the design of this product, it provides an effective seal against contamination ingress such as dust, dirt and water which also assists in reducing grease consumption and prolonging the life of the components which are lubricated using this state of the art orange grease.

### **RENOLIT EP RANGE**

RENOLIT EP RENOLIT EP 00 RENOLIT EP 0 RENOLIT EP 1 RENOLIT EP 2 AU Pack Sizes =20g =175kg Pack Sizes =20g =175kg Pack Sizes =20g =175kg Pack Sizes =20g =180kg Pack Sizes =450g =2.5kg =20kg =55kg =180kg Pack Sizes =450g =2.3kg =2.5kg =20kg =55kg =180kg

The RENOLIT EP range are multi-purpose lithium soap based greases for general purpose lubrication and automotive chassis points.

RENOLIT EP 0 and 00 are semi-fluid 'self-levelling' industrial grease with extreme pressure additives for severe service and high load applications. RENOLIT EP 0 and 00 are self-sealing and the non-drip characteristic forms a protective seal preventing ingress of contaminants.

RENOLIT EP 1 is recommended for slow running and normal speed highly stressed plain and roller bearings.

RENOLIT EP 1 is based on lithium 12 hydroxy-stearate, high viscosity mineral oils and extreme pressure (EP) additives that are free of heavy metal compounds. RENOLIT EP 1 has good EP properties and protects against corrosion. It has resistance to oxidation and suitable for applications in shock load lubrication.

RENOLIT EP 1 is easily pumpable.

RENOLIT EP 2 AU is recommended for the lubrication of automotive chassis points. RENOLIT EP 2 AU is a multi-purpose lithium 12 hydroxy-stearate grease, containing extreme pressure, anti-corrosion and anti-oxidation additives to maximise performance under low to medium temperature applications.

RENOLIT EP 2 AU has good EP properties and protects against corrosion. It has resistance to mechanical shear and suitable as a multi-purpose grease for applications in shock load lubrication.

## **SPECIALTY GREASES**

### **RENOLIT EPLITH 00**

Pack Sizes = 20L = 180kg

RENOLIT EPLITH 00 is a lithium soap thickened grease containing a highly refined mineral oil lubricant. RENOLIT EPLITH 00 is a gear grease of NLGI 00 consistency, containing anti-oxidation and extreme pressure additives which allow it to be used for extended periods where high temperature and arduous loading conditions are experienced. Having a mineral oil base fluid,

RENOLIT EPLITH 00 is readily compatible with mineral gear oils making changeover convenient. RENOLIT EPLITH 00 grease has been tested on worm, spiral bevel, helical and straight tooth gears with every success. It is usually used in gearboxes that have operated satisfactorily on mineral oils, where the main requirement of such a lubricant is to extend both the lubricant service life and the maintenance periods.

### **RENOLIT POLIPLEX**

RENOLIT POLIPLEX 1 RENOLIT POLIPLEX 2 
 Pack Sizes = 55g
 =450g = 20L = 180kg

 Pack Sizes = 55g
 =450g = 20L = 180kg

The RENOLIT POLIPLEX Series are lithium complex thickened greases that represent the most advanced lubricating technology. They are formulated for conditions of extreme pressure and temperature but are also ideal for general purpose applications. To increase the adhesiveness and film strength of Renolit Poliplex Series, they are manufactured with state of the art polymers. They also incorporate specially selected mineral oils, extreme pressure, anti-wear, rust and corrosion additives that gives them the performance properties to properly lubricate today's modern equipment.

### RENOLIT EP X1

Pack Sizes = 20L = 180kg

RENOLIT EP-X 1 is designed for, and particularly suited to, geared coupling applications where heavily loaded conditions exist. The additive treatment and the high viscosity of the base oil helps to minimise the wear damage which results from bearing surfaces coming into direct contact with each other. RENOLIT EP-X 1 is a lithium soap-thickened grease containing a high level of molybdenum disulphide. The grease also contains oil soluble additives to increase its load carrying capacity and reduce wear. RENOLIT EP-X 1 is also inhibited against corrosion and oxidation.

### **RENOLIT HI TEMP**

RENOLIT HI TEMP 100 RENOLIT HI TEMP 220 RENOLIT HI TEMP 460 Pack Sizes =250g =380g =400g =18kg Pack Sizes =120g =250g =450g =120g =20kg =170kg Pack Sizes =20kg =170kg

A fully synthetic, special lubricating grease with lithium complex soap. RENOLIT HI TEMP has a low friction coefficient to reduce starting and running torque, and to improve its efficiency. It has excellent anti-corrosion properties even under adverse environmental factors (moist, aggressive atmosphere and water). RENOLIT HI TEMP is very aging resistant, work-stable, water resistant, and resists high thermal loads.

## **ELECTRIC MOTOR GREASES**

### **RENOLIT GP 3**

Pack Sizes = 240g = 450g = 20kg = 180kg

RENOLIT GP3 grease is a lithium soap grease based on mineral oil featuring properties like temperature stability, water resistance and easy pumpability.

RENOLIT GP 3 contains additives to improve corrosion protection and ageing resistance. It is suitable for temperatures from -30°C to +120°C. RENOLIT GP 3 is classified as K 3 K-30 according to DIN 51 502 and NLGI-grade 3.

### **RENOLIT PU-MA 2**

Pack Sizes =450g =20kg

RENOLIT PU-MA 2 is a fully synthetic, high temperature grease with organic thickener and solid lubricants.

RENOLIT PU-MA 2 has high thermal stability, long-term corrosion protection, good water resistance and optimal lubricity over a wide temperature range.

### **OPEN GEAR GREASES**

### **CEPLATTYN GT**

CEPLATTYN GT 10 CEPLATTYN GT 30

30

Pack Sizes = 1L = 190L = 950L Pack Sizes = 190L

High-viscosity adhesive lubricants for heavy-duty Open Gears eg on kilns, mills and driers in the raw material industry. A synthetic base oil, new types of additives, and a combination of white, reaction-effective solid lubricants. This combination guarantees an extraordinarily good wear protection and an extremely high lubricant film stability.

### **CEPLATTYN KG 10 HMF**

CEPLATTYN KG 10 HMF CEPLATTYN KG 10 HMF-1000 CEPLATTYN KG 10 HMF-2500 Pack Sizes = 20L = 190L Pack Sizes = 15L = 190L = 500L Pack Sizes = 1L = 190L = 950L

Serving as a sprayable, high-alloyed, graphite-containing adhesive operating lubricant for Open Gear drives, as primarily used in rotary kilns, ball mills for coal grinding, dryers, and large excavators, for example used in primary industries. Large chains, gear racks, and sliding surfaces in steel hydraulics construction can also be lubricated reliably.

### **STABYL HD**

Pack Sizes = 180L

STABYL HD is a heavy duty lithium soap grease containing a highly viscous base oil and wear reducing EP additives and solid lubricants. Recommended for the greasing of large slow-running, self-aligning roller bearings in special roller presses and plain bearings subject to high pressures.

### STABYL 300 AL 2

Pack Sizes = 240g = 450g = 20kg = 180kg

STABYL 300 AL 2 is a mineral oil based, graphite aluminium complex soap grease with good EP- and high temperature properties. It is a universal grease for extreme conditions including very high, fluctuating temperatures.

# Coolants

FUCHS Lubricants coolants are specifically formulated to withstand the harsh conditions of mining environments, providing superior heat dissipation and thermal stability to protect engines and machinery from overheating. Their anti-corrosion properties safeguard critical components against damage, extending equipment life and reducing maintenance costs.

## **COOLANTS**

### **FRICOFIN HDD 50**

Pack Sizes = 10L = 20L = 205L = 1000L = Bulk

Ultra high performance, ready-to-use engine coolant premix based on monoethylene glycol. Free of amines and phosphates with low silicate technology.

FRICOFIN HDD 50 is a long term coolant based on mono ethylene glycol for heavy duty diesel applications, as well as stationary engines. FRICOFIN HDD 50 is free of amines and phosphates, combined with a low silicate technology, reliably preventing highly loaded engines from frost, overheating, corrosion and cavitation. This most efficient protection extends to all metals in the cooling system, especially aluminium.



-**SAE J814** 

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### FRICOFIN HDD-PG 50

Pack Sizes = 201 = 10001 = Bulk

FRICOFIN HDD-PG PREMIX is a fully formulated, ultra high performance propylene glycol engine coolant.

FRICOFIN HDD-PG PREMIX is free of amines and phosphates, combined with a low silicate technology, reliably preventing highly loaded engines from frost, overheating, corrosion and cavitation. This most efficient protection extends to all metals in the cooling system, especially aluminium.

<ul> <li>Specifications</li> <li>ASTM D 3306 / ASTM D 6210 Type IV-FF /</li> <li>ASTM D 7583</li> <li>TMC RP 330</li> </ul>	Approvals N/A	Recommendations ASTM D 6257 (obsolete) ASTM D 6211 (obsolete) CAT EC-1 CUMMINS CES 14603 DETROIT DIESEL 7SE 298 CHRYSLER MS9769 FORD WSS-M97B51-A1 FREIGHTLINER 48-22880 KENWORTH R026-170-97 MAN 324 TYPE N MACK 014GS17004 MTU MTL 5048 NEW HOLLAND (WSN-M97B18-D) PACCAR CS0185 PETERBILT 8502.002 FA DE CANNA GOD1
		<ul> <li>MTU MTL 5048</li> <li>NEW HOLLAND (WSN-M97B18-D)</li> <li>PACCAR CS0185</li> </ul>

### **FRICOFIN DP 50**

Pack Sizes =5L =20L =205L =1000L =Bulk

Ultra high performance coolant ready-mix based on monoethylene glycol. Offers frost protection down to -35°C.

FRICOFIN DP 50 is a coolant ready mix based on monoethylene glycol and demineralized water for commercial vehicle and passenger car engines as well as stationary installed combustion engines. As a premixed Si-OAT antifreeze it combines inhibitors of organic acids with highest change intervals with fast reagent silicates.

FRICOFIN DP 50 is free of nitrite, borate, amine and phosphate.

### **Specifications**

- AFNOR NF R 15-601 TYPE 3 ASTM D 3306 TYPE III ΞÍ
- ASTM D 4985 BS 6580:2010
- SAE J814
- Approvals CUMMINS CES 14603 DEUTZ DQC CC-14

  - DETROIT DIESEL 93K217 DTFR 29D120 (former MB 326.5)
    - MAN 324 TYPE SI-OAT
  - MB-APPROVAL 326.6
  - MTU MTL 5048
  - VW TL 774-G (G12++) VOITH (172.00225040 – Type Si-OAT)
- Recommendations ASTM D 6210 TYPE III
   IVECO 18-1830
- LIEBHERR LH-01-COL3A SCANIA TB 1451
- VW TL-7774J (G13)

# Wire Rope & Chain Lubricants

### WIRE ROPE LUBRICANTS

### **CENTIGARD DRL B1000**

Pack Sizes = 1L = 20L = 205L = 1000L

CENTIGARD DRL B 1000 has been specially developed to meet the demanding requirements of wire rope and sheave lubrication on draglines. When applied frequently and correctly, this product penetrates to the rope core, coating the wire strands with a protective corrosion resistant lubricating film. The product is based on highly refined mineral oils, compounded with additives that impart enhanced anti-rust, tackiness, water-repellency and water displacing characteristics.

CENTIGARD DRL B 1000 is also fortified with solid lubricants to convey truly superior anti-wear characteristics. CENTIGARD DRL B 1000 offers exceptional boundary lubrication properties between sheave and rope. Regular application of CENTIGARD DRL B 1000 ensures resistance to wire rope deterioration by either fatigue or corrosion, especially when operating in wet, arduous conditions.

### **CENTIGARD 499X**

**Pack Sizes** = 1L = 20L = 205L

CENTIGARD 499X is based on a selected low viscosity, highly refined mineral lubricating oil, into which additives for rust prevention, water displacement and water repellency have been blended. This grade is used in a variety of lubricant/corrosion prevention of metals applications, which range from treating components prior to short-term storage to the lubrication and protection in use of friction driven winding wire ropes. This grade, due to its low viscosity and additive treatment, when used as a wire rope dressing in friction drive applications exhibits excellent penetration properties which enables lubrication, dewatering and corrosion protection of the wire rope strands through to the core, thus protecting the rope against deterioration due to fatigue or corrosion.

CENTIGARD 499X is recommended for use on lift suspension, compensating and governor ropes in addition to mine hoist ropes on friction type winders. When used on friction driven winding ropes, Centigard 499X should be used sparingly and applied manually to a descending rope with any excess product being removed from the ascending rope to prevent slippage occurring.

## **CHAIN LUBRICANTS**

### **UNILUBE CHAIN & BAR**

UNILUBE CHAIN & BAR LIGHT UNILUBE CHAIN & BAR MEDIUM UNILUBE CHAIN & BAR HEAVY

Pack Sizes = 1L = 200L Pack Sizes = 20L = 200L = 1000L Pack Sizes = 1L = 5L = 20L = 200L = 1000L

The UNILUBE CHAIN & BAR range is designed for the lubrication of both fixed and mobile equipment which is operating under normal to harsh conditions. They contain additives which allow for improved adhesion to the components for reduced fling-off, as well as excellent anti-wear and corrosion protection properties to ensure the long life of the equipment. The UNILUBE CHAIN & BAR range can be used on chains and bars in all applications from home use to the harshest forestry applications, as well as fixed and mobile equipment. For wire ropes the product has excellent penetrating properties to ensure that the product protects the rope from the inside, as well as forming a barrier on the surface of the rope to assist in reducing overall wear.

# Ancillary Fluids

## **ANCILLARY FLUIDS**

### **PLANTOTAC CSR**

PLANTOTAC CSR is a general purpose lubricant based on a renewable, high VI polar base stock. The polarity of the base fluid when compared with conventional mineral oil based products promotes greater adherence to metallic surfaces. PLANTOTAC CSR has proven itself in difficult areas of chain and general purpose lubrication where a tenacious lubricant film is required. The natural tackiness of the lubricating film allows for reduced oil consumption and maximum resistance to "fling off" from moving chains, sprockets and areas where an adhesive oil is required. PLANTOTAC CSR is greater than ninety percent biodegradable as measured by CEC-L-33-T-82. This product can be termed rapidly biodegradable and can be regarded as the premium choice lubricant in total loss lubrication applications.

### **RIMGUARD PLUS PREMIX**

RIMGUARD PLUS PREMIX is a multipurpose additive that prolongs tyre life by functioning as a corrosion inhibitor, tyre coolant,

Pack Sizes = 15L = 210L = 1000L

Pack Sizes = 10001

### ADBLUE

sealant and leak detector.

Additive for injection into diesel SCR exhaust systems (NOx reduction in exhaust gases).

### **ANTICORIT VCI UNI 0-40**

ANTICORIT VCI UNI 0-40 is a rust-preventive oil with unique properties. It contains built in VCI inhibitors. In a closed system it therefore sets free the protective VCI-vapours over a long period of time. It is the ideal rust preventive for fuel tanks, gearboxes and similar "closed systems". ANTICORIT VCI UNI 0-40 protects iron, steel, copper, brass, bronze and other metals without direct contact with the metal surface by the vapour phase. For each m<sup>3</sup> of void space to be protected, only 0.3 – 0.4 litres (300 - 400 mL) of ANTICORIT VCI UNI 0-40 is needed.

### **ANTICORIT BW 366**

The waxy residual film produced by ANTICORIT BW 366 is suitable for protection of press dies, casting moulds, machinery, spare parts, tools, machined parts, etc. It is also suitable for use as an underseal protectant and panel deadener for motor vehicles. The residual film has self-healing properties and excellent salt spray resistance. This ensures maximum protection of machinery and components that are treated with ANTICORIT BW 366.

Pack Sizes = 1L = 205L = 1000L

Pack Sizes = 20L

Pack Sizes =8kg

## **ANCILLARY FLUIDS**

### **ANTICORIT DFO**

Pack Sizes = 300ml = 20L = 205L

Anticorit DFO contains a unique combination of proprietary components, which rapidly penetrate and displace moisture from metal surfaces to provide a strongly adhered corrosion resistant film. The combination of selective wetting agents and film forming inhibitors are ideal for applications, which have been machined with water miscible fluids, electroplated or phosphated. Typical applications include surface protection of small mass produced components such as turntables of automatic machines, razor blades and precision measuring equipment. This product complies with the requirements of MDG 3006 MRT 2 (April 1995) section 4 for use in underground mining applications. 300ml is an aerosol can using CO2 as propellant.

### RENOLIN ETERNA

RENOLIN ETERNA 32 RENOLIN ETERNA 46 RENOLIN ETERNA 68 Pack Sizes =20L =205L =1000L Pack Sizes =20L =205L =1000L Pack Sizes =20L =205L

RENOLIN ETERNA turbine oils were developed for gas, steam and expansion turbines as well as for turbo compressors with and without gearboxes based on the latest lubrication technology. The excellent properties of the base oils produced in a special process are enhanced using a carefully selected additive system. RENOLIN ETERNA oils contain no organo-metallic compounds and are therefore ashless. They provide a zinc-free wear protection.

### **PLANTO DRILLSAFE 100**

Pack Sizes = 300ml = 20L = 205L

PLANTO DRILLSAFE 100 was developed as an air line lubricant for use on pneumatic tools, and more specifically to reduce the health risks associated with the inhalation by workers of mineral lubricating oil-based aerosols, mists and vapours that are emitted in the equipment exhausts.

PLANTO DRILLSAFE 100 has been formulated to enable free flow through air line lubricators or integral oilers at the low temperatures which may be encountered.

### NYNAS NYTRO GEMINI X

Pack Sizes = 182L = 1000L

NYTRO GEMINI X is an inhibited high-grade oil, conforming to IEC 60296:2020 edition 5.0 and is Type A, classified as TVAI. Developed and formulated to deliver strong resistance to oil degradation, NYTRO GEMINI X provides excellent oxidation stability for a longer transformer life with less maintenance.

### NYNAS NYTRO LIBRA

Pack Sizes = 182L

NYTRO LIBRA is an uninhibited transformer oil that conforms to IEC 60296:2020 edition 5.0, Type B, TVBU. Developed and formulated to deliver solid resistance to oil degradation, NYTRO LIBRA provides good oxidation stability thanks to its natural inhibitors. This increases the possibilities for a longer transformer life with less maintenance.

# Degreasers & Cleaners

FUCHS degreasers and cleaners offer powerful and efficient solutions for mining applications, ensuring equipment and surfaces remain clean and well-maintained in demanding environments. These products are formulated to remove heavy grease, oil, and dirt buildup quickly and effectively, improving the performance and lifespan of mining machinery.



## WATER BASED CLEANING PRODUCTS

### **RENOCLEAN ECOSOLVE**

Pack Sizes = 20L = 200L = 1000L

RENOCLEAN ECOSOLVE is a biodegradable, water-based, heavy duty wash with "quick-break" properties. RENOCLEAN ECOSOLVE is formulated to effectively clean heavy mining & industrial equipment such as dump trucks, cranes, prime movers, trailers, dozers and excavators. RENOCLEAN ECOSOLVE is highly effective for removing most soils including dirt, mud, grime, oil and soot. The quick-break property of RENOCLEAN ECOSOLVE ensures that emulsified grease and oil separate in a grease trap, allowing the resultant layers to be treated, recycled or disposed.

### **RENOCLEAN QBV WASH**

Pack Sizes = 20L = 205L = 1000L

RENOCLEAN QBV WASH is a heavy-duty detergent-based cleaning product possessing quick break properties, formulated to meet the stringent requirements of the transportation industry for a high-pressure cleaning solution. It is a biodegradable heavy- duty detergent which can be used for virtually all cleaning applications, including pressure cleaning, steam cleaning, heavy duty vehicle washing and for many other industrial applications. RENOCLEAN QBV WASH is highly effective in removing most soils including dirt, mud, grime, oil, soot & red dirt. The quick break properties of RENOCLEAN QBV WASH ensures that the emulsified grease and oil rapidly separate in a grease trap, allowing the resultant water layer to be drained to the sewer as treated trade waste.

### **RENOCLEAN HEAVY WASH**

Pack Sizes = 5L = 20L = 205L = 1000L

RENOCLEAN HEAVY WASH is a concentrated, water-based, high performance and non-caustic truck wash. This product effectively removes road grime and dirt from all surfaces including plastic, rubber, chrome, aluminium and paintwork.

RENOCLEAN HEAVY WASH is biodegradable and free rinsing. It is suitable for pressure washers and automated washing systems. This product was specifically developed not to streak and is suitable for use on side curtains of trailers and all fabrics found in the transport and marine environments.

RENOCLEAN HEAVY WASH is primarily used to wash trucks, trailers, cars, boats, coaches and mining equipment. It has also proven very effective as a floor and laundry cleaner (especially on greasy clothing). RENOCLEAN HEAVY WASH contains corrosion inhibitors to protect surfaces from rusting and does not contain caustic chemicals. It leaves paintwork shiny and streak-free when used as directed. This product is economical to use and can be used across a broad range of dilution to control performance and cost.

## SOLVENT BASED CLEANING PRODUCTS

### **RENOCLEAN QBD PLUS 65**

Pack Sizes = 20L = 205L = 1000L

Renoclean QBD Plus 65 is a solvent based degreasing solution developed to dissolve oil and grease residues. This allows easy emulsification and removal of contaminants from soiled components. Renoclean QBD Plus 65 is suitable for heavy duty degreasing operations where a versatile solvent based cleaner is required. It does not affect any common metals and is easily removed by rinsing with water. Renoclean QBD Plus 65 was developed to be compatible with triple interceptor pits and most conventional oil separator units, allowing for fast separation of the oil and solvent residues from washing/cleaning systems. Renoclean QBD Plus 65 is soluble in oil and water.

### **RENOCLEAN DEGREASER 9110**

**Pack Sizes** = 300G Aerosol = 20L = 205L = 1000L

RENOCLEAN DEGREASER 9110 is a solvent based degreasing solution developed to dissolve oil and grease residues. This allows easy emulsification and removal of contaminants from soiled components.

RENOCLEAN DEGREASER 9110 is suitable for heavy duty degreasing operations where a versatile solvent based cleaner is required. It does not effect any common metals and is easily removed by rinsing with cold water.

### **RENOCLEAN BRAKE CLEANER**

Pack Sizes = 20L

RENOCLEAN BRAKE CLEANER is a highly effective cleaner for brakes and drive chains. Effectively removes dirt, dust, grease, oil and brake fluid from brake discs, callipers and drums, and removing heavy residues and deposits from chains.

### **RENOCLEAN PARTSWASH**

Pack Sizes = 20L

RENOCLEAN PARTSWASH is a solvent based degreasing solution developed to dissolve oil and grease residues. This allows easy emulsification and removal of contaminants from soiled components.

RENOCLEAN PARTSWASH is suitable for heavy duty degreasing operations where a versatile solvent based cleaner is required. It does not effect any common metals. For industrial partswash units where water rinsing is not desirable due to the incidence of flash rusting on parts. It is low in odour, making it pleasant to use. And is insoluble in water.

### **RIVOLTA ACS 3**

Pack Sizes = 750ml

RIVOLTA A.C.S. 3 is a cleaner which evaporates very fast and without residues. It is perfectly suitable for a rapid and complete cleaning/degreasing of shiny metal and steel items including brakes. RIVOLTA A.C.S. 3 is a rapid cleaner spray using a CO2 propellant which evaporates without any residues. This product is based upon several highly effective components which can remove different contaminations each.

FOR CONFIRMATION OF SUITABILITY, PLEASE REFER TO THE FUCHS NET LUBE APP, FUCHS WEBSITE AND/OR CONTACT YOUR FUCHS SALES REPRESENTATIVE

# Dust Supressants

### **RENOCLEAN AIR HOLD-DOWN**

Pack Sizes = 20L = 1000L

Combination of natural binding and wetting agents. On evaporation of the diluent water, the residues bond particles together to hold dust down. Additionally, the product has a humectant property that helps retain latent moisture.

### **RENOCLEAN AIR LOCK-DOWN**

Pack Sizes ■ Bulk

A high performance dispersed polymeric binding agent. On evaporation of the diluent water, the residues cure to form a resilient, flexible film that locks the dust down by crusting loose surfaces. Typically applied at 5 -10 %. Robust and persistent control against the effects of wind, vehicles and heavy equipment. Long-lasting and rain-resistant.

### **RENOCLEAN AIR SPRAY-DOWN**

Pack Sizes ■ Bulk

Additive for water-spray systems. A potent combination of wetting agents; effective even at high dilution. Greatly increases the ability of water to adhere to and spread-out over air-borne particles. Improves the ability of water to penetrate and dampen loose surfaces. Facilitates the de-scaling in piping, cooling and spray systems. Reduction of deposits and maintenance cost.

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