

# Lubricants product program

2/2015



LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.



# **LUBRICANTS. TECHNOLOGY. PEOPLE.**



- \_ World's largest independent lubricant specialist.**
- \_ Complete ranges of industrial and automotive lubricants.**
- \_ Leading first-fill competence for the German automotive industries.**
- \_ Plants, Mannheim and Kiel.**



## Numbers and facts

PLANT: MANNHEIM AND KIEL

HOLDING: FUCHS PETROLUB SE

HEADQUARTERS: Mannheim

TRUE LUBRICANT SPECIALIST: 100 % focus on lubricants

FULL LINE OF PRODUCTS:  
More than 2,000 products and 6,000 product-pack combinations

CERTIFIED BY: DIN EN ISO 9001:2008,  
ISO/TS 16949:2009, DIN EN ISO 14001:2004  
BS OHSAS 18001:2007, KTA 1401

For more than 80 years, we have been concentrating all our activities and research efforts on the development of innovative lubricants. This specialization means that we are enjoying continuous growth – geographically, technically and in the number of application areas.

Today, FUCHS is a company that offers powerful lubricants and associated specialties worldwide in practically all areas of application and industries.

What makes our products more valuable: We develop lubricants on an application-specific basis and tailored to our partners' processes. Together, we look for the best lubricant for our customers. This type of collaboration is unique in its form, scope and intensity.

We call it a development partnership. This ability is based on one key feature: As a true lubricant specialist with our headquarters in Mannheim /Germany, we are the largest independent lubricant specialist, and this independence makes all the difference. We are open to new methods and visionary approaches – a prerequisite for innovations. And innovations are a FUCHS trademark.

# OUR LUBRICANTS KEEP THE WORLD MOVING



Volkswagen Group Award 2014



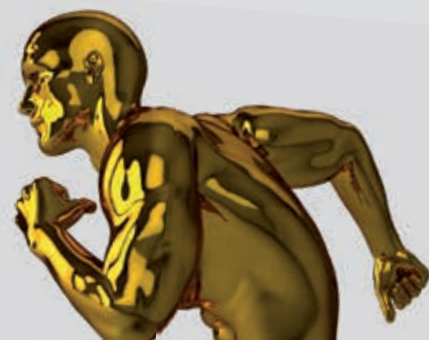
- \_ **Leading competence in automotive lubricants.**
- \_ **Complete range of lubricants for all automotive applications.**
- \_ **Groundbreaking XTL® technology.**



## Groundbreaking XTL® technology.

While starting, engine oils with XTL® technology reach faster and easier the parts of an engine, which urgently require a protective oil film – even under extreme conditions and over the entire duration of the oil change interval.

This means: Easier start-ups, less wear and lower fuel consumption. Even oil consumption is significantly lower than with conventional SAE 5W-30 oils.



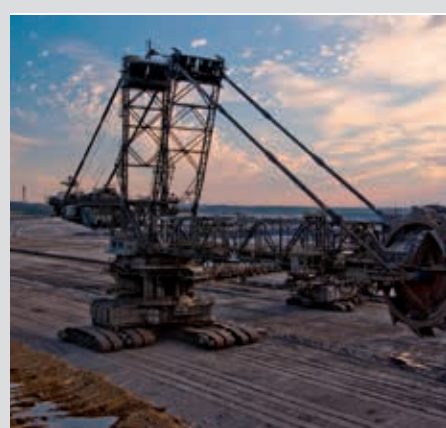
**XTL**®  
TECHNOLOGY



# THE WORLD OF INDUSTRIAL LUBRICANTS



- \_ Proximity: A highly-effective network of salespeople, application engineers and fully-manned offices.
- \_ Competence: A clear focus as a lubricant specialist.
- \_ Future: Our high-tech lubricants help conserve precious resources.



## Real competence.

The majority of all manufacturing technologies only function as planned with specially designed lubricant solutions. Operators, machines, tools, components as well as storage and transport times all have to be considered. Apart from increased productivity, health and safety at work are decisive parameters.

FUCHS also makes an important contribution to higher productivity and safety at work in the field of machining. Our research development experts have created water-miscible products which allow successful and efficient machining in the skin-compatible pH-range. Furthermore, our new corrosion protection concepts offer individual system solutions.





## Automotive Lubricants

1_Engine Oils   <b>TITAN</b>	Page 12 to 23
2_Transmission Fluids   <b>TITAN</b>	Page 24 to 31
3_Hydraulic Fluids   <b>TITAN</b>	Page 32
4_Lubricants for Agricultural Machinery   <b>AGRIFARM</b>	Page 33 to 37
5_Motorcycle Lubricants   <b>Silkolene</b>	Page 38 to 41
6_Service Products   <b>MAINTAIN</b>	Page 42 to 44
7_Specialties	Page 45
8_Greases   <b>RENOLIT</b>	Page 46 and 47
9_Rapidly Biodegradable Lubricants   <b>PLANTO</b>	Page 48 and 49

## Industrial Lubricants

1_Industrial Lubricants   <b>RENOLIN, RENISO, PLANTO</b>	Page 52 to 58
2_Greases   <b>RENOLIT, PLANTO</b>	Page 59 to 61
3_Cutting Fluids   <b>ECOCOOL, ECOCUT</b>	Page 62 to 64
4_Quenching Fluids   <b>THERMISOL</b>	Page 65
5_Cleaners   <b>RENOCLEAN</b>	Page 66 to 68
6_Forming Lubricants   <b>RENOFORM</b>	Page 69
7_Corrosion Protection   <b>ANTICORIT</b>	Page 70 to 72







# Product overview

## Automotive Lubricants



## 1\_Engine Oils | **TTAN**

Engine Oils for Passenger Cars	Page 12 to 15
Racing Engine Oils; Engine Oils for Passenger Cars with Gas Engines	Page 15
Engine Oils for Mixed Fleets	Page 16
Engine Oils for Commercial Vehicles	Page 17 and 18
Engine Oils for Commercial Vehicles with Gas Engines	Page 19
Monograde Engine Oils	Page 20
Gas Engine Oils	Page 21 and 22
4-Stroke MARINE Engine Oils; 2-Stroke MARINE Engine Oils; Railroad Engine Oils; 2-Stroke Engine Oils	Page 23

## 2\_Transmission Fluids | **TTAN**

Gear Oils for Passenger Cars	Page 24
Gear Oils for Passenger Cars and Commercial Vehicles	Page 25
Gear Oils for Commercial Vehicles	Page 26 and 27
Multifunctional Gear Oils for Construction Machinery	Page 28
Double Clutch Transmission Fluids (DCTF)	Page 29
Automatic Transmission Fluids (ATF)	Page 29 to 31

## 3\_Hydraulic Fluids | **TTAN**

Page 32

## 4\_Lubricants for Agricultural Machinery | **AGRIFARM**

STOU Oils	Page 33 and 34
Engine Oils	Page 35
UTTO Oils	Page 36
Gear Oils, Chain Saw Oil, Milking Machine Oil	Page 37

## 5\_Motorcycle Lubricants | **Siikolene**

RACE	Page 38
RIDE, QUADS ATV, SCOOT	Page 39
MAINTAIN	Page 40 and 41

## 6\_Service Products | **MAINTAIN**

Brake Fluids, Antifreeze	Page 42 and 43
Washer Fluid Additive, Diesel Fuel Additive	Page 44

## 7\_Specialties

Page 45

## 8\_Greases | **RENOLIT**

Page 46 and 47

## 9\_Rapidly Biodegradable Lubricants | **PLANTO**

Page 48 and 49



# 1\_ENGINE OILS



**TITAN**

Engine Oils for Passenger Cars	Specifications	Approvals	FUCHS Recommendations
<p><b>TITAN GT1 EVO SAE 0W-20</b></p> <p><b>XTL<sup>®</sup></b> TECHNOLOGY</p>	<p>Premium Performance Engine Oil with new XTL<sup>®</sup>-Technology in path-breaking viscosity class. Specially designed for highly stressed downsized engines with maximum power output, for extreme fuel-economy characteristics and reduced CO<sub>2</sub> emissions. Excellent cold starting behaviour, very fast oil circulation and outstanding performance reserves.</p>	<p>ACEA A1/B1</p>	<p>BMW LONGLIFE-14 FE+</p> <p>TOYOTA HONDA</p>
<p><b>TITAN GT1 PRO V SAE 0W-20</b></p> <p><b>XTL<sup>®</sup></b> TECHNOLOGY</p> <p><b>NEW</b></p>	<p>Premium Performance Engine Oil with new XTL<sup>®</sup>-Technology in ground-breaking viscosity class. Specially designed for modern VOLVO vehicles, for extreme fuel-economy characteristics and reduced CO<sub>2</sub> emissions. Excellent cold starting behaviour, very fast oil circulation and outstanding performance reserves.</p>		<p>VOLVO VCC RBS0-2AE</p>
<p><b>TITAN GT1 SAE 0W-20</b></p> <p><b>XTL<sup>®</sup></b> TECHNOLOGY</p>	<p>Premium Performance Engine Oil with new XTL<sup>®</sup>-Technology in path-breaking viscosity class and globally unique Zinc-free Additive Technology, for high performance cars with gasoline and diesel engines. Specially designed for sportive driving and maximum power output. Extreme fuel-economy characteristics. Excellent cold starting behaviour. Outstanding performance reserves.</p>		<p>ACEA C2 API SL ILSAC GF-4</p>
<p><b>TITAN GT1 PRO FLEX SAE 5W-30</b></p> <p><b>XTL<sup>®</sup></b> TECHNOLOGY</p>	<p>Premium Performance, extreme fuel-economy engine oil with new XTL<sup>®</sup>-Technology for optimum cold start ability and outstanding performance reserves. For modern passenger cars and light commercial vehicles with or without extended service intervals. Specially developed for BMW, Mercedes-Benz and Opel vehicles with exhaust after treatment and turbocharger.</p>	<p>ACEA C3 API SN/SM</p>	<p>BMW LONGLIFE-04 dexos2<sup>™</sup> (GB2C0209075) MB-APPROVAL 229.51 MB-APPROVAL 229.52 VW 502 00/ 505 00/ 505 01</p> <p>FIAT 9.55535-S3 FORD M2C917-A GM-LL-A-025 GM-LL-B-025</p>
<p><b>TITAN GT1 PRO C-3 SAE 5W-30</b></p> <p><b>XTL<sup>®</sup></b> TECHNOLOGY</p>	<p>Premium Performance, extreme fuel-economy engine oil with new XTL<sup>®</sup>-Technology for optimum cold start ability and outstanding performance reserves. For modern passenger cars and light commercial vehicles with or without extended service intervals. Specially developed for BMW-, VW and Mercedes-Benz vehicles with exhaust after treatment and turbocharger.</p>	<p>ACEA C3</p>	<p>BMW LONGLIFE-04 MB-APPROVAL 229.51 PORSCHE C30 VW 504 00/ 507 00</p> <p>FIAT 9.55535-S3 FORD M2C917-A</p>
<p><b>TITAN GT1 SAE 5W-40</b></p> <p><b>XTL<sup>®</sup></b> TECHNOLOGY</p>	<p>Premium Performance, fuel-economy engine oil with new XTL<sup>®</sup>-Technology for optimum cold start ability and outstanding performance reserves. For modern passenger cars and light commercial vehicles with or without extended service intervals. Specially developed for vehicles with exhaust after treatment and turbocharger.</p>	<p>ACEA C3 API SN/SM/CF FORD M2C917-A</p>	<p>BMW LONGLIFE-04 MB-APPROVAL 226.5 MB-APPROVAL 229.31 PORSCHE A40 RENAULT RN0700/ RN0710 VW 502 00 / 505 00 / 505 01</p> <p>FIAT 9.55535-S2</p>

# 1\_ENGINE OILS



**TITAN**

Engine Oils for Passenger Cars		Specifications	Approvals	FUCHS Recommendations
<b>TITAN GT1 SAE 0W-30</b>  <b>NEW</b>	Premium Performance, fuel-economy engine oil for modern passenger cars and light commercial vehicles. Specially developed for latest PSA gasoline and diesel vehicles with exhaust after treatment and turbocharger. Excellent cold starting, lower oil consumption and minimized exhaust emissions.	ACEA C2	PSA B71 2312	FIAT 9.55535-DS1/GS1 IVECO 18-1811 CLASSE SC1 LV
<b>TITAN GT1 PRO C-1 SAE 5W-30</b>	Premium Performance, extreme fuel-economy engine oil for modern passenger cars and light commercial vehicles with or without extended service intervals. Specially developed for vehicles with exhaust after treatment and turbocharger. Optimum cold starting, lower oil consumption and minimized exhaust emissions.	ACEA C1		JASO DL-1 FORD WSS-M2C934-B MAZDA
<b>TITAN GT1 PRO C-2 SAE 5W-30</b>	Premium Performance, extreme fuel-economy engine oil for modern passenger cars and light commercial vehicles with or without extended service intervals. Specially developed for PSA vehicles with exhaust after treatment and turbocharger. Optimum cold starting, lower oil consumption and minimized exhaust emissions.	ACEA C2 API SN/SM/CF	PSA B71 2290	FIAT 9.55535-S1 HONDA IVECO 18-1811 CLASSE SC1 MAZDA SUBARU SUZUKI TOYOTA
<b>TITAN GT1 PRO C-4 SAE 5W-30</b>	Premium Performance, extreme fuel-economy engine oil for modern passenger cars and light commercial vehicles with or without extended service intervals. Specially for Renault vehicles with exhaust after treatment and turbocharger. Optimum cold starting, lower oil consumption and minimized exhaust emissions.	ACEA C4	MB-APPROVAL 226.51 RENAULT RN0720	
<b>TITAN GT1 PRO B-Tec SAE 5W-30</b>  <b>XTL<sup>®</sup></b> TECHNOLOGY	Premium Performance, extreme fuel-economy engine oil with new XTL <sup>®</sup> -Technology for modern passenger cars and light commercial vehicles with or without extended service intervals. Specially for Mercedes-Diesel-Vehicles with exhaust after treatment and turbocharger. Optimum cold starting, lower oil consumption and minimized exhaust emissions.	ACEA C2/C3 API SN	MB-APPROVAL 229.52	
<b>TITAN Supersyn LONGLIFE PLUS SAE 0W-30</b>	Ultra High Performance, extreme fuel-economy engine oil formulated with fully synthetic base oil for VW engines. Specially developed for VW Longlife Technology. For all passenger car gasoline and diesel engines with or without pump injector technology. Excellent cold starting and lower oil consumption.		VW 503 00/506 00/506 01	ACEA A5/B5 BMW LONGLIFE 01-FE
<b>TITAN Supersyn LONGLIFE SAE 0W-30</b>	Ultra High Performance, extreme fuel-economy engine oil for a variety of vehicles with or without extended service intervals. Excellent cold starting and lower oil consumption.	ACEA A3/B4 API SL	MB-APPROVAL 229.5	BMW LONGLIFE-01

# 1\_ENGINE OILS



**TITAN**

Engine Oils for Passenger Cars		Specifications	Approvals	FUCHS Recommendations
<b>TITAN Supersyn LONGLIFE SAE 0W-40</b>	Ultra High Performance, fuel-economy engine oil for a variety of vehicles with or without extended service intervals. Excellent cold starting and lower oil consumption.	ACEA A3/B4 API SN	MB-APPROVAL 229.5 PORSCHE A40 VW 502 00/505 00	AMG ASTON-MARTIN BMW LONGLIFE-01 FORD M2C937-A
<b>TITAN Supersyn LONGLIFE SAE 5W-40</b>	Ultra High Performance, fuel-economy engine oil for a variety of vehicles with or without extended service intervals. Optimum cold starting and lower oil consumption.	ACEA A3/B4 API SN/SM/CF	BMW LONGLIFE-01 MB-APPROVAL 226.5 MB-APPROVAL 229.5 PORSCHE A40 RENAULT RN0700/ RN0710 VW 502 00/ 505 00	GM-LL-B-025 HYUNDAI PSA B71 2296
<b>TITAN Supersyn FE SAE 0W-30</b> <b>NEW</b>	Ultra High Performance, fuel-economy engine oil for a variety of vehicles with or without extended service intervals. Excellent cold starting properties and low oil consumption.	ACEA A5/B5	VOLVO VCC 95200377	RENAULT RN 0700
<b>TITAN Supersyn SAE 5W-30</b>	Ultra High Performance, extreme fuel-economy engine oil for a variety of vehicles with or without extended service intervals. Optimum cold starting and lower oil consumption.	ACEA A3/B4 API SL/CF	MB-APPROVAL 229.3 VW 502 00/505 00	BMW LONGLIFE-98 GM-LL-A-025 GM-LL-B-025 RENAULT RN0700/ RN0710
<b>TITAN Supersyn F Eco-B SAE 5W-20</b>	Ultra High Performance, extreme fuel-economy engine oil especially developed for Ford EcoBoost gasoline engines. Optimum cold starting and lower oil consumption.	ACEA A1/B1 API SN	FORD M2C948-B	CHRYSLER MS 6395 FORD M2C925-A FORD M2C925-B
<b>TITAN Supersyn F Eco-DT SAE 5W-30</b>	Ultra High Performance, extreme fuel-economy engine oil especially suitable for Ford DuraTorq-Diesel engines. Optimum cold starting and lower oil consumption.	ACEA A1/B1 ACEA A5/B5 API SL/CF FORD M2C913-C	FORD M2C913-D	CHRYSLER MS 6395 FORD M2C913-A FORD M2C913-B IVECO 18-1811 CLASSE S1/S2 JAGUAR M2C913-B RENAULT RN0700
<b>TITAN Supersyn SAE 5W-40</b>	Ultra High Performance, fuel-economy engine oil for a variety of vehicles with or without extended service intervals. Optimum cold starting and lower oil consumption.	ACEA A3/B4 API SN/SM/CF	MB-APPROVAL 229.3 PORSCHE A40 RENAULT RN0700/ RN0710 VW 502 00/505 00	BMW LONGLIFE-98 FIAT 9.55535-H2/M2/N2/ Z2 GM-LL-A-025 GM-LL-B-025
<b>TITAN Supersyn SAE 5W-50</b>	Ultra High Performance, fuel-economy engine oil for passenger cars. Optimum cold starting behaviour and low oil consumption. Highly durable lubricating film and high oil pressure.			ACEA A3/B4 API SL/CF
<b>TITAN Supersyn SAE 10W-60</b>	Ultra High Performance, fuel-economy engine oil for passenger cars. Low oil consumption. Highly durable lubricating film and high oil pressure.			ACEA A3/B3 API SL/CF FIAT 9.55535-H3
<b>TITAN SYN MC SAE 10W-40</b>	Super High Performance, fuel-economy engine oil based on MC-synthesis for a variety of gasoline and diesel engines in passenger cars. Lower oil consumption.	ACEA A3/B4 API SL/CF	MB-APPROVAL 229.1	BMW SPECIAL FIAT 9.55535-D2/G2 MAZDA VW 500 00/505 00

# 1\_ENGINE OILS



**TITAN**

Engine Oils for Passenger Cars		Specifications	Approvals	FUCHS Recommendations
<b>TITAN SYN SN SAE 0W-20</b> <b>NEW</b>	Super High Performance, fuel-economy engine oil for a variety of gasoline engines in passenger cars. Good cold starting behaviour and low oil consumption.	API SN ILSAC GF-5		
<b>TITAN FORMULA SAE 15W-40</b>	High Performance Engine Oil specially for all normally aspirated and turbocharged gasoline and diesel engines in passenger cars operated under normal conditions.	API SL/CG-4	MB-APPROVAL 229.1	ACEA A3/B3/B4 FIAT 9.55535-D2/G2 VW 501 01/505 00

Racing Engine Oils		Specifications	Approvals	FUCHS Recommendations
<b>TITAN RACE SAE 5W-30</b>	Premium Racing Engine Oil for Race cars with Gasoline or Diesel engines. Especially developed for professional use in racing applications. Combines optimum protection with power increase and reduced fuel consumption due to minimized frictional losses.			ACEA C3
<b>TITAN RACE SAE 10W-60</b>	Premium Racing Engine Oil for Race cars fuelled with Gasoline or Diesel engines. Especially developed for professional use in racing applications. Offers optimum protection due to minimized frictional losses and a stable oil film.			ACEA A3/B3 API SL/CF

Engine Oils for Passenger Cars with Gas Engines		Specifications	Approvals	FUCHS Recommendations
<b>TITAN GT1 PRO GAS SAE 5W-30</b>	Premium Performance Gas Engine Oil for modern passenger cars and light commercial vehicles. Specially for gasoline engines with LPG- and CNG operation. Optimum engine cleanness, lower oil consumption and minimized exhaust emissions.	ACEA C3 API SM	BMW LONGLIFE-04 dexos <sup>TM</sup> (GB2C0209075) MB-APPROVAL 229.51 VW 502 00	CHEVROLET FIAT 9.55535-G1 OPEL
<b>TITAN GT1 PRO GAS SAE 5W-40</b>	Premium Performance Gas Engine Oil for modern passenger cars and light commercial vehicles. Specially for gasoline engines with LPG- and CNG operation. Optimum engine cleanness, lower oil consumption and minimized exhaust emissions.	ACEA C3 API SM	BMW LONGLIFE-04 MB-APPROVAL 229.31 VW 502 00 / 505 00 / 505 01	CITROËN FIAT 9.55535-H2/ N2/M2/S2/Z2 FORD PEUGEOT RENAULT
<b>TITAN SYN PRO GAS SAE 10W-40</b>	Super High Performance Gas Engine Oil for passenger cars and light commercial vehicles. Specially developed for gas engines with LPG- and CNG operation.	ACEA A3/B4 API SL	MB-APPROVAL 229.1	BMW SPECIAL CHEVROLET FIAT 9.55535-G2 VW 500 00

# 1\_ENGINE OILS



**TITAN**

Engine Oils for Mixed Fleets		Specifications	Approvals	FUCHS Recommendations
<p><b>TITAN UNIMAX ULTRA MC SAE 10W-40</b></p>	<p>Premium Performance Engine Oil based on MC-synthesis for all commercial vehicles, off-highway equipment and passenger cars. Substantial rationalisation opportunities for mixed fleets. Prolongation of drain intervals possible with many manufacturers. Good cold starting and lower oil consumption.</p>	<p>ACEA E7/B4/B3/A3 API CI-4 GLOBAL DHD-1 JASO DH-1</p>	<p>CUMMINS CES 20077/8 DETROIT DIESEL 93K215 DEUTZ DQC III-10 MACK EO-M PLUS MAN M 3275-1 MB-APPROVAL 228.3 MB-APPROVAL 229.1 MB-APPROVAL 235.27 MTU DDC TYPE-2 RENAULT RLD / RLD-2 VOITH-RETARDER „A“ VOLVO VDS-3</p>	<p>ALLISON C-4 CAT ECF-2 CUMMINS CES 20071/2/6 DAF VW 500 00/ 501 01/505 00</p>
<p><b>TITAN UNIMAX PLUS MC SAE 10W-40</b></p>	<p>Ultra High Performance, fuel-economy engine oil based on MC-synthesis for all commercial vehicles, off-highway equipment and passenger cars. Substantial rationalisation opportunities for mixed fleets. Prolongation of drain intervals possible with some manufacturers. Good cold starting and lower oil consumption.</p>	<p>ACEA E7/B3/A3 API CH-4</p>	<p>CUMMINS CES 20077 DEUTZ DQC II-10 MAN M 3275-1 MB-APPROVAL 228.3 MB-APPROVAL 229.1 MB-APPROVAL 235.27 MTU DDC TYPE 2 RENAULT RD / RD-2 VOITH-RETARDER „A“ VOLVO VDS-2</p>	<p>ALLISON C-4 CUMMINS CES 20071/2/6 DAF MACK EO-M PLUS SCANIA</p>
<p><b>TITAN UNIVERSAL HD SAE 15W-40</b></p>	<p>High Performance Engine Oil for mixed fleets operated under normal conditions. Good performance in normally aspirated and turbocharged diesel engines.</p>	<p>ACEA A3/B3/B4 API CG-4/CF/SL</p>	<p>DEUTZ DQC I-02 MAN 271 MB-APPROVAL 228.1 MB-APPROVAL 229.1 MTU DDC TYPE 2</p>	<p>ACEA E2 MIL-L-2104 E ALLISON C-4 CASE MS 1120 DAF MACK EO-L NH 330G SCANIA STEYR A-202 VOLVO VDS VW 501 01/505 00</p>



# 1\_ENGINE OILS



**TITAN**

Engine Oils for Commercial Vehicles		Specifications	Approvals	FUCHS Recommendations
<b>TITAN CARGO MAXX</b> <b>SAE 5W-30</b> 	<p>Premium MAXX Performance Engine Oil with new XTL®-Technology. Specially developed for vehicles with modern exhaust after treatment and turbocharger. Optimum cold starting properties and ageing stability for extreme fuel-economy over the whole drain-interval.</p>	ACEA E6	DEUTZ DQC IV-10 LA MACK EO-N MAN M 3477 MB-APPROVAL 228.51 MTU DDC TYPE 3.1 RENAULT RXD/RLD-2 VOLVO VDS-3	ACEA E7 IVECO 18-1804 CLASSE TLS E6
<b>TITAN CARGO MAXX</b> <b>SAE 10W-40</b> 	<p>Premium MAXX Performance Engine Oil with new XTL®-Technology. Specially developed for vehicles with modern exhaust after treatment and turbocharger. Good cold starting properties and ageing stability for fuel-economy over the whole drain-interval.</p>	ACEA E9/E7/E6 API CI-4 CAT ECF-1-a JASO DH-2	DEUTZ DQC IV-10 LA MACK EO-M PLUS MACK EO-N MAN M 3271-1 MAN M 3477 MB-APPROVAL 228.51 MB-APPROVAL 235.28 MTU DDC TYPE 3.1 RENAULT RXD/RGD/ RLD-2 SCANIA LA VOITH-RETARDER „B“ VOLVO VDS-3 / CNG	CUMMINS CES 20077 DAF IVECO 18-1804 CLASSE TLS E9 MAN M 3277 CRT
<b>TITAN CARGO SL</b> <b>SAE 5W-30</b>	<p>Ultra High Performance, extreme fuel-economy engine oil for a variety of commercial vehicle diesel engines, with optimum cold starting and lower oil consumption. Specially developed for extended service intervals.</p>	ACEA E7/E4	CUMMINS CES 20077 DEUTZ DQC IV-10 FORD WSS-M2C212-A1 MACK EO-N MAN M 3277 MB-APPROVAL 228.5 MTU DDC TYPE 3 RENAULT RXD/RLD-2 SCANIA LDF-3 VOLVO VDS-3	DAF IVECO 18-1804 CLASSE TFE
<b>TITAN CARGO LD3</b> <b>SAE 10W-40</b>	<p>Ultra High Performance, fuel-economy engine oil for use in SCANIA Euro 6 vehicles. Specially developed for extended service intervals.</p>	ACEA E7/E4 API CF	MAN M 3277 MB-APPROVAL 228.5 SCANIA LDF-3	
<b>TITAN CARGO MC</b> <b>SAE 10W-40</b>	<p>Ultra High Performance, fuel-economy engine oil based on MC-synthesis for a variety of commercial vehicle diesel engines. Specially developed for extended service intervals. Good cold starting and lower oil consumption.</p>	ACEA E7/E4 API CI-4 GLOBAL DHD-1	CUMMINS CES 20077/8 DETROIT DIESEL 93K215 DEUTZ DQC III-10 MACK EO-M PLUS MACK EO-N MAN M 3277 MB-APPROVAL 228.5 MTU DDC TYPE 3 RENAULT RXD/RLD-2 SCANIA LDF-2 VOLVO VDS-3	DAF IVECO 18-1804 SDFG OM-1901A

# 1\_ENGINE OILS



**TITAN**

Engine Oils for Commercial Vehicles	Specifications	Approvals	FUCHS Recommendations
<b>TITAN CARGO EU6 SAE 5W-30</b>  <b>NEW</b>	Ultra High Performance, fuel-economy engine oil for use in many OEM Euro 6 engines fitted with modern exhaust after treatment devices. Excellent cold starting properties and low oil consumption.	ACEA E9/E7/E6 API CJ-4 CAT ECF-3 JASO DH-2	CUMMINS CES 20081 DEUTZ DQC IV-10 LA MACK EO-0 PREMIUM PLUS MAN M 3677 MB-APPROVAL 228.51 MTU DDC TYPE 3.1 RENAULT RLD-3 SCANIA LA VOLVO VDS-4
<b>TITAN CARGO SAE 5W-40</b>	Ultra High Performance, fuel-economy engine oil, specially developed for commercial vehicle diesel engines with extended service intervals, exhaust after treatment and turbocharger.	ACEA E9/E7 API CJ-4 CAT ECF-2/ECF-3	CUMMINS CES 20081 DETROIT DIESEL 93K218 DEUTZ DQC II-10 LA FAWDE Q/XC 3135-2007 MACK EO-0 PREMIUM PLUS MAN M 3575 MB-APPROVAL 228.31 RENAULT RLD-3 VOLVO VDS-4
<b>TITAN CARGO SAE 10W-30</b>	Ultra High Performance, fuel-economy engine oil, specially developed for commercial vehicle diesel engines with extended service intervals, exhaust after treatment and turbocharger.	ACEA E9 API CJ-4 CAT ECF-1a/ ECF-2/ ECF-3	DEUTZ DQC III-10LA MACK EO-0 PREMIUM PLUS MAN 3575 MB-APPROVAL 228.31 RENAULT RLD-3 VOLVO VDS-4
<b>TITAN CARGO SAE 15W-40</b>	Ultra High Performance, fuel-economy engine oil for a variety of commercial vehicle diesel engines. Specially developed for Volvo with extended service intervals, exhaust after treatment and turbocharger.	ACEA E9/E7 API CJ-4/CI-4 PLUS/CI-4 CAT ECF-2/ECF-3	CUMMINS CES 20081 DEUTZ DQC III-10 LA DETROIT DIESEL 93K218 FAWDE Q/XC 3135-2007 MACK EO-0 PREMIUM PLUS MAN M 3275-1 MAN M 3575 MB-APPROVAL 228.31 MTU DDC TYPE 2.1 RENAULT RLD-3 VOLVO VDS-4
<b>TITAN TRUCK PLUS SAE 15W-40</b>	Super High Performance Engine Oil for a variety of diesel and gasoline engines. Specially for highly-loaded commercial vehicle diesel engines. Lower oil consumption.	ACEA E7 API CI-4/SL GLOBAL DHD-1 CAT ECF-1a/ECF-2	CUMMINS CES 20076/7/8 DETROIT DIESEL 93K215 DEUTZ DQC III-10 MACK EO-N MAN M 3275-1 MB-APPROVAL 228.3 MTU DDC TYPE 2 RENAULT RLD/RLD-2 VOLVO VDS-3

# 1\_ENGINE OILS



**TITAN**

Engine Oils for Commercial Vehicles with Gas Engines	Specifications	Approvals	FUCHS Recommendations
<p><b>TITAN TRUCK SAE 15W-40</b></p>	<p>Super High Performance Engine Oil for a variety of diesel engines. Specially for highly-loaded commercial vehicle diesel engines. Lower oil consumption.</p>	<p>ACEA E7 API CH-4/SJ CAT ECF-1-a</p>	<p>CUMMINS CES 20076/7 DEUTZ DQC II-10 MACK EO-N MAN M 3275-1 MB-APPROVAL 228.3 MTU DDC TYPE 2 RENAULT RLD/RLD-2 VOLVO VDS-3</p>
<p><b>TITAN CARGO PRO GAS SAE 5W-30</b></p>	<p>Premium Performance, zinc-free, extreme fuel-economy engine oil for highly-supercharged commercial vehicle gas engines as well as diesel engines with exhaust gas after treatment systems. Specially developed for gas powered engines with and without turbocharger. Optimum cold starting, lower oil consumption and minimized exhaust emissions. For MAN gas engines extended drain intervals are possible depending on engine type.</p>	<p>ACEA E6</p>	<p>MAN M 3271-1 MAN M 3271-3 MAN M 3477 MB-APPROVAL 226.9 MB-APPROVAL 235.28 VOITH-RETARDER „B“</p>

# 1\_ENGINE OILS



**TITAN**

Monograde Engine Oils		Specifications	Approvals	FUCHS Recommendations
<b>TITAN UNIVERSAL HD SAE 10W</b>	High Performance Monograde Engine Oil for gasoline and diesel engines. Specially developed for off-road vehicles. Depending upon manufacturer regulation also in other aggregates applicable.	ACEA E2 API CF-4/SG	MAN 270 MB-APPROVAL 228.0 ZF TE-ML 03B	MIL-L-2104 D ALLISON C-4 CAT TO-2 ZF TE-ML 02C
<b>TITAN UNIVERSAL HD SAE 20W-20</b>	High Performance Monograde Engine Oil for gasoline and diesel engines. Specially developed for off-road vehicles. Depending upon manufacturer regulation also in other aggregates applicable.	ACEA E2 API CF-4/SG	MAN 270 MB-APPROVAL 228.0 MB-APPROVAL 235.27 VOITH-RETARDER „A“	MIL-L-2104 D ALLISON C-4 CAT TO-2 ZF TE-ML 02C
<b>TITAN UNIVERSAL HD SAE 30</b>	High Performance Monograde Engine Oil for gasoline and diesel engines. Specially developed for off-road vehicles. Depending upon manufacturer regulation also in other aggregates applicable.	ACEA E2 API CF-4/SG	DEUTZ DQC I-02 MAN 270 MB-APPROVAL 228.2 MTU DDC TYPE 2 ZF TE-ML 04B	MIL-L-2104 D ALLISON C-4 CAT TO-2 ZF TE-ML 02C
<b>TITAN UNIVERSAL HD SAE 40</b>	High Performance Monograde Engine Oil for gasoline and diesel engines. Specially developed for off-road vehicles. Depending upon manufacturer regulation also in other aggregates applicable.	ACEA E2 API CF-4/SG	DEUTZ DQC I-02 MAN 270 MB-APPROVAL 228.2 MB-APPROVAL 235.12 MTU DDC TYPE 2 ZF TE-ML 04B	API CF-2 MIL-L-2104 D ALLISON C-4 CAT TO-2 ZF TE-ML 02C
<b>TITAN UNIVERSAL HD SAE 50</b>	High Performance Monograde Engine Oil for gasoline and diesel engines. Specially developed for off-road vehicles. Depending upon manufacturer regulation also in other aggregates applicable.	ACEA E2 API CF-4/SG	DEUTZ DQC I-02 MAN M 3275-2 MB-APPROVAL 228.0	MIL-L-2104 D ALLISON C-4 CAT TO-2 ZF TE-ML 02C
<b>TITAN UNIVERSAL HD SAE 30 MTU</b>	High Performance dedicated break in engine oil for MTU diesel and gas engines, developed to improve operating characteristics with enhanced corrosion protection.		MTU DDC TYPE 1	
<b>TITAN UNIVERSAL HD SAE 30 ZF</b>	High Performance Monograde Engine Oil especially for initial fill of ZF-transmissions.		ZF TE-ML 02H, 04B	ACEA E2 API CF MAN 270 MB 228.0 MTU DDC TYPE 1

# 1\_ENGINE OILS



**TITAN**

Gas Engine Oils	Specifications	Approvals	FUCHS Recommendations
<p><b>TITAN GANYMET ULTRA</b></p>	<p>Premium Performance Engine Oil, zinc-free, for stationary gas engines.</p>	<p>2G TA-003 agenitor series 2,3                      AGROGEN                      CAT CG132, CG170, CG260                      JENBACHER TA 1000-1109                      - A, CAT: series 2, 3, 4 (Version B), 6 (Version C, E)                      - B, CAT: series 2, 3                      MAN M 3271-4                      MTU Onsite Energy DK-BS-0001 (E, P, B)                      MTU Onsite Energy DK-BS-0002 (B)                      MWM TR 0199-99-02105 (DEUTZ POWER SYSTEMS)                      SEVA TRS-07                      SPANNER RE<sup>2</sup>                      TEDOM                      61-0-0281.1/L, B, S</p>	
<p><b>TITAN GANYMET PLUS</b></p>	<p>Super High Performance Engine Oil, zinc-free, for stationary gas engines.</p>	<p>CAT CG132, CG170, CG260                      DREYER &amp; BOSSE                      JENBACHER TA 1000-1109                      - B: series 2, 3                      MTU Onsite Energy DK-BS-0001 (B)                      MWM TR 0199-99-02105 (DEUTZ POWER SYSTEMS)                      SEVA TRS-07</p>	
<p><b>TITAN GANYMET PLUS LA</b></p>	<p>„Low Ash“ Super High Performance Engine Oil, zinc-free, for stationary gas engines.</p>	<p>CAT CG132, CG170, CG260                      DEUTZ TR 0199-99-01213                      MWM TR 0199-99-02105 (DEUTZ POWER SYSTEMS)                      SEVA TRS-07                      TEDOM                      61-0-0281.1/G, P</p>	<p>CATERPILLAR                      CUMMINS                      WAUKESHA</p>
<p><b>TITAN GANYMET</b></p>	<p>High Performance Engine Oil for stationary gas engines.</p>	<p>ASJA AMBIENTE ITALIA                      JENBACHER TA 1000-1109                      - C: series 2, 3                      MAN M 3271-4                      MTU Onsite Energy DK-BS-0001 (B,K)                      SEVA TRS-07</p>	

# 1\_ENGINE OILS



**TITAN**

Gas Engine Oils	Specifications	Approvals	FUCHS Recommendations
<p><b>TITAN GANYMET LA</b></p>	<p>„Low Ash“ High Performance Engine Oil for stationary gas engines.</p>	<p>CAT CG132, CG170, CG260                      DEUTZ TR 0199-99-01213                      JENBACHER TA 1000-1109                      - A, CAT: series 2, 3, 4 (Version B), 6 (Version C, E)                      MAN M 3271-2                      MTU Onsite Energy DK-BS-0001 (E, P, K)                      MWM TR 0199-99-02105 (DEUTZ POWER SYSTEMS)                      SEVA TRS-07</p>	<p>CATERPILLAR                      CUMMINS                      WAUKESHA</p>

# 1\_ENGINE OILS



**TITAN**

4-Stroke MARINE Engine Oils		Specifications	Approvals	FUCHS Recommendations
<b>TITAN MARINE FC-W 10W-30</b>	Super High Performance Engine Oil for marine leisure 4-stroke gasoline engines, in accordance with the latest requirements of NMMA.		NMMA FC-W	BOMBARDIER EVINRUDE, HONDA JOHNSON MERCURY SEADOO SUZUKI YAMAHA

2-Stroke MARINE Engine Oils		Specifications	Approvals	FUCHS Recommendations
<b>TITAN MARINE TC-W 3</b>	Ultra High Performance Engine Oil for marine leisure 2-stroke engines, in accordance with the latest requirements of NMMA.		NMMA TC-W3	BOMBARDIER EVINRUDE, JOHNSON KAWASAKI MARINER MERCURY SEADOO SUZUKI TOHATSU YAMAHA

Railroad Engine Oils		Specifications	Approvals	FUCHS Recommendations
<b>TITAN RAILGEN 13 SAE 40</b>	High Performance Rail Locomotive Monograde Engine Oil according to API CF utilizing zinc and chlorine free additive technology.	API CD/CF	GE Generation 4LL GM - EMD GENERATION 5	LMOA GENERATION 5 CATERPILLAR 3600

2-Stroke Engine Oils		Specifications	Approvals	FUCHS Recommendations
<b>TITAN 2T 100 S</b>	Ultra High Performance two-stroke engine oil for Autolube and Premix systems formulated with fully synthetic base oils.	API TC JASO FD ISO L-EGD		TISI
<b>TITAN 2T S</b>	Super High Performance 2-stroke engine oil. Mixes rapidly. Suitable for Autolube as well as Premix systems.	API TC JASO FC ISO-L-EGC		
<b>TITAN 2T M</b>	High Performance 2-stroke engine oil. Mixes rapidly. Suitable for Autolube as well as Premix systems.	API TC		

## 2\_TRANSMISSION FLUIDS



**TITAN**

Gear Oils for Passenger Cars		Spezifikation	Approvals	FUCHS Recommendations
<b>TITAN SINTOFLUID FE SAE 75W</b>	Premium Performance Manual Transmission Fluid offering increased gearbox efficiency in passenger cars due to low viscosity level. Reduces fuel consumption and offers best properties at low temperature. Suitable as fill for life fluid according to manufacturer.	API GL-4		VW TL 521 71 (G 052 171 A1/A2) VW TL 521 78 (G 052 178 A2) VW TL 525 12 (G 052 512 A2) VW TL 525 27 (G 052 527 A2) VW TL 726 (G 052 726 A2/G 055 726 A2/ G 060 726 A2/G 070 726 A2)
<b>TITAN SINTOFLUID SAE 75W-80</b>	Premium Performance Manual Transmission Fluid for passenger cars. Offering good gearbox efficiency. Suitable as fill for life fluid according to manufacturer.	API GL-5		MIL-L-2105 D ALFA ROMEO BMW 83 22 0 309 031 BMW 83 22 0 403 247 BMW 83 22 7 533 818 BMW 2300 1434 404 BMW 2300 7533 513 BMW 2300 7533 818 CITROËN, FIAT FORD M2C200-C/ C2/ C3 LANCIA OPEL 19 40 182, 19 40 757, 19 40 768, 19 40 776 PEUGEOT, RENAULT VOLVO 97308 VW 501 50 (G 005 000 05/ G 005 000/ G 005 000 20/ G 052 911 A1/A2)
<b>TITAN SINTOPOID FE SAE 75W-85</b>	Premium Performance Gear Oil offering increased gearbox efficiency in passenger cars due to low viscosity level, formulated with fully-synthetic base oils. Reduces fuel consumption and offers best properties at low temperature. Suitable as fill for life fluid according to manufacturer.	API GL-5	MB-APPROVAL 235.7 ZF TE-ML 18	ALFA ROMEO, BMW FIAT, LANCIA VW TL 521 45-X (G 052 145 A1) VW TL 521 90 (G 052 190 A2/ G 055 190 A2)
<b>TITAN SINTOPOID SAE 75W-90</b>	Premium Performance Axle Gear Oil for passenger cars, also for for high-offset hypoid drives offering good gearbox efficiency. Suitable as fill for life fluid according to manufacturer.	API GL-5		MIL-L-2105 D BMW VW TL 521 45-Y (G 052 145 A2)
<b>TITAN SINTOPOID LS SAE 75W-90</b>	Premium Performance fully-synthetic multifunctional gear oil. Suitable for axles and transfer gearboxes with or without self locking differentials and also as trouble shooter for conventional manual transmissions.	API GL-4/-5/-5 incl. LS		VW G50/G51
<b>TITAN SINTOPOID LS SAE 75W-140</b>	Premium Performance Gear Oil for axle and transfer gearboxes, formulated with fully-synthetic base oils. Suitable for axle and transfer gearboxes with and without limited slip differential.	API GL-5		BMW 83 22 2 282 583 BMW 83 22 9 407 870 CHRYSLER MS-8985 FORD M2C192-A GM 12346140 JOHN DEERE JDM J11G SCANIA STO 1:0



## 2\_TRANSMISSION FLUIDS



**TITAN**

Gear Oils for Passenger Cars and Commercial Vehicles	Specifications	Approvals	FUCHS Recommendations
<b>TITAN SUPERGEAR MC SAE 80W-90</b>	Super High Performance Gear Oil based on MC-Synthesis for extended oil change intervals.	API GL-4/GL-5 SCANIA STO 1:0	MAN 341 TYPE E2 MAN 341 TYPE Z2 MAN 342 TYPE M2 MB-APPROVAL 235.0 ZF TE-ML 02B, 05A, 12L, 12M, 16B, 17B, 19B, 21A
<b>TITAN SUPERGEAR MC SAE 80W-140</b>	Super High Performance Gear Oil based on MC-Synthesis for extended oil change intervals.	API GL-4/GL-5 SCANIA STO 1:0	JOHN DEERE JDM J11E OPEL 19 42 386 RENAULT VI VOLVO 97310 ZF TE-ML 08
<b>TITAN SUPERGEAR SAE 80W-90</b>	High Performance Gear Oil for extended oil change intervals.	API GL-4/GL-5	MAN 342 TYPE M2 ZF TE-ML 05A, 12E, 17B, 19B, 21A
<b>TITAN SUPERGEAR SAE 85W-140</b>	High Performance Gear Oil for extended oil change intervals.	API GL-4/GL-5	ZF TE-ML 05A, 12E, 16D, 21A
<b>TITAN GEAR LS SAE 90</b>	High Performance LS (Limited Slip) hypoid gear oil for axles with or without limited slip differentials.	API GL-5	ZF TE-ML 05C, 12C, 16E, 21C
<b>TITAN GEAR MP SAE 80</b>	High Performance Gear Oil for synchronized and non-synchronized manual gearboxes as well as auxiliary drives, axles and differentials in commercial vehicles and passenger cars.	API GL-4	MAN 341 TYPE E1 MAN 341 TYPE Z2 MB-APPROVAL 235.1 ZF TE-ML 17A
<b>TITAN GEAR MP SAE 90</b>	High Performance Gear Oil for synchronized and non-synchronized manual gearboxes as well as auxiliary drives, axles and differentials in commercial vehicles and passenger cars.	API GL-4	MAN 341 TYPE Z1
<b>TITAN GEAR HYP SAE 90</b>	High Performance Gear Oil for highly-stressed differentials in commercial vehicles and passenger cars.	API GL-5	MAN 342 TYPE M1 MB-APPROVAL 235.0 ZF TE-ML 16C, 17B, 19B, 21A
			FORD M2C9102-A JOHN DEERE JDM J11E OPEL 19 42 387 VOLVO 97310 VW TL 727 ZF TE-ML 07, 08

## 2\_TRANSMISSION FLUIDS



**TITAN**

Gear Oils for Commercial Vehicles		Specifications	Approvals	FUCHS Recommendations
<b>TITAN CYTRAC SL SAE 75W-90</b>	Premium Performance Gear Oil for highly-stressed hypoid axles in commercial vehicles formulated with fully-synthetic base oils. Developed for the longest oil change intervals in commercial vehicle axle drives.	API GL-5 SCANIA STO 1:0	MAN 342 TYPE S1	JOHN DEERE JDM J11E JOHN DEERE JDM J11G MB 235.8 VOLVO 97312 ZF TE-ML 05B, 07, 08, 12B, 16F, 17B
<b>TITAN CYTRAC RR SAE 75W-90</b>	Fully synthetic Premium Performance Hypoid Gear Oil for axle drives in railcars and heavy duty vehicles.	API GL-5 API MT-1 SCANIA STO 1:0	SAE J2360 SIEMENS FLENDER Gear Units for Railway Vehicles VOITH TURBO 132.00374401 (3.325-340) VOITH TURBO 132.00374402 (3.325-342) ZF TE-ML 05B, 12L, 12N, 16F, 17B, 19C, 21B	Gmeinder Getriebebau railway applications
<b>TITAN CYTRAC MB SYNTH SAE 75W-90</b>	Premium Performance Gear Oil for extended drain intervals in commercial vehicles, specially developed for Mercedes-Benz Actros vehicles, formulated with fully-synthetic base oils. Reduces fuel consumption by improving gearbox efficiency. Suitable for the longest oil change intervals.	API GL-4	MAN 341 TYPE MB MB-APPROVAL 235.11	ZF TE-ML 08
<b>TITAN CYTRAC ULTRA SYNTH SAE 75W-80</b>	Premium Performance Gear Oil for extended drain intervals in commercial vehicles, especially developed for ZF heavy duty transmissions with and without Intarder. Reduces fuel consumption by improving gearbox efficiency. Suitable for longest oil change intervals.	API GL-4 VOLVO 97307	MAN 341 TYPE Z5 ZF TE-ML 01E, 02E, 16P	DAF IVECO MAN RENAULT TRUCKS
<b>TITAN CYTRAC MAN SYNTH SAE 75W-80</b>	Premium Performance Gear Oil for extended drain intervals in commercial vehicles manual gearboxes, specially developed for manual and automatic ZF-gearboxes, formulated with fully-synthetic base oils. Reduces fuel consumption by improving gearbox efficiency. Suitable for the longest oil change intervals and compatible with Carbon-Synchronizers.	API GL-4	MAN 341 TYPE Z4 ZF TE-ML 01L, 02L, 16K	DAF EATON IVECO RENAULT VOLVO 97307
<b>TITAN CYTRAC LD SAE 75W-80</b>	Ultra High Performance Gear Oil for extended oil change intervals in commercial vehicles fitted with integral intarders or supplementary retarders.	API GL-4	EATON MAN 341 TYPE E3	DAF MAN 341 TYPE Z3 VOLVO 97305 ZF TE-ML 02D, 08
<b>TITAN CYTRAC HSY SAE 75W-90</b>	Ultra High Performance Gear Oil for commercial vehicle manual transmissions and axle drives formulated with fully-synthetic base oils.	API GL-4/GL-5	ZF TE-ML 05B, 12L, 12N, 16F, 17B, 19C, 21B	DAF MAN 341 TYPE E3 MAN 341 TYPE Z2 MAN 342 TYPE M3 MAN M 3343 TYPE S JOHN DEERE JDM J11E JOHN DEERE JDM J11G SCANIA STO 1:0 ZF TE-ML 07

## 2\_TRANSMISSION FLUIDS



**TITAN**

Gear Oils for Commercial Vehicles	Specifications	Approvals	FUCHS Recommendations
<p><b>TITAN CYTRAC 235.8 SAE 75W-90</b></p> <p><b>NEW</b></p>	<p>Premium Performance Gear Oil for highly-stressed hypoid axles in commercial vehicles formulated with fully-synthetic base oils. Developed for the longest oil change intervals especially in DAIMLER commercial vehicle axle drives.</p>	<p>MB-APPROVAL 235.8</p>	
<p><b>TITAN GEAR HYP LD SAE 80W-90</b></p>	<p>Super High Performance Gear Oil specially developed for Mercedes-Benz commercial vehicles. Offering enhanced thermal stability and fuel-economy potential.</p>	<p>API GL-5 API MT-1</p> <p>MAN 342 TYPE M3 MB-APPROVAL 235.20 ZF TE-ML 05A, 12L, 12M, 16B, 17B, 19B, 21A</p>	<p>MIL-PRF-2105 E ARVIN MERITOR AXLES MACK GO-J JOHN DEERE JDM J11E SCANIA STO 1:0 ZF TE-ML 07A</p>

## 2\_TRANSMISSION FLUIDS



**TITAN**

Multifunctional Gear Oils for Construction Machinery	Specifications	Approvals	FUCHS Recommendations
<b>TITAN UTTO PRO</b>	Ultra High Performance Multifunctional Oil for gears, axles and hydraulic systems with improved wear protection and wide range of application temperatures.	API GL-4 SAE J 306: 75W-80	VOLVO WB 101  ALLISON C-4 CASE MS 1207/1209/1210 FORD M2C86-C FORD M2C134-D JOHN DEERE JDM J20C JOHN DEERE JDM J20D KOMATSU AXO 80 (KES 07.866) KUBOTA UDT FLUID MASSEY FERGUSON CMS M 1143, 1135 VOLVO WB 102 ZF TE-ML 03E, 03F, 05F, 06K
<b>TITAN UTTO PLUS SAE 5W-30</b>	Ultra High Performance Multifunctional Oil for gears, axles and hydraulic systems on construction and agricultural machinery with or without wet brakes and limited slip differentials.	SAE J300: 5W-30 SAE J306: 75W-80	CASE MS 1207/1209/1210 FORD M2C86-C, M2C134-D JOHN DEERE JDM J20C JOHN DEERE JDM J20D JOHN DEERE JDM J14 KOMATSU KES 07.866 KUBOTA UDT FLUID MASSEY FERGUSON CMS M 1143, 1135 STEYR 397.88.0001 VOLVO WB 101
<b>TITAN UTTO ZF</b>	Super High Performance Gear Oil for ZF axles with limited-slip differentials. Recommended for construction machinery and material-handling vehicles axles.		ZF TE-ML 05F, 06K, 17E, 21F  KOMATSU-HANOMAG VOLVO WB 101 ZF TE-ML 03E
<b>TITAN UTTO TO-4 SAE 10W</b>	Super High Performance multifunctional lubricant for hydraulics in construction machinery.	API GL-4 CAT TO-4 KOMATSU KES 07.868.1	ALLISON C-4 DANA EATON
<b>TITAN UTTO TO-4 SAE 30</b>	Super High Performance multifunctional transmission lubricant for construction machinery.	API GL-4 CAT TO-4 KOMATSU KES 07.868.1	ZF TE-ML 03C, 07F  ALLISON C-4 ALLISON TES-439 DANA EATON
<b>TITAN UTTO TO-4 SAE 40</b>	Super High Performance multifunctional transmission lubricant for construction machinery.	API GL-4 CAT TO-4 KOMATSU KES 07.868.1	ALLISON C-4 ALLISON TES-439 DANA EATON
<b>TITAN UTTO TO-4 SAE 50</b>	Super High Performance multifunctional lubricant for final drives in construction machinery.	API GL-4 CAT TO-4 KOMATSU KES 07.868.1	DANA EATON
<b>TITAN UTTO TO-4 SAE 60</b>	Super High Performance multifunctional lubricant for final drives in construction machinery.	API GL-4 CAT TO-4	

## 2\_TRANSMISSION FLUIDS



**TITAN**

Double Clutch Transmission Fluid (DCTF)		Specifications	Approvals	FUCHS Recommendations
<b>TITAN DCTF 52529</b> <b>NEW</b>	Premium Performance DCTF, specially developed for the Audi DL382 Double Clutch Transmission with wet clutch. Provides optimum wear protection and excellent friction properties even under hard conditions and offers best shifting performance over the whole lifetime.		VW TL 52 529-C	
<b>TITAN DCTF</b>	Premium Performance DCTF, specially developed for modern Double Clutch Transmission with wet clutch. The wide performance profile offers the use in diverse Double Clutch Transmissions of different manufacturers. Provide optimum wear protection and excellent shifting properties even under hard conditions over the whole lifetime.			BMW Drivelogic 7-speed CHRYSLER Powershift 6-speed FORD Powershift 6-speed MITSUBISHI TC-SST 6-speed PEUGEOT DCS 6-speed CITROEN DCS 6-speed RENAULT EDC 6-speed VOLVO Powershift 6-speed VW (AUDI, SEAT, SKODA) 6-speed FWD

Automatic Transmission Fluids (ATF)		Specifications	Approvals	FUCHS Recommendations
<b>TITAN ATF 7134 FE</b>	Premium Performance ATF with reduced viscosity, especially developed to further optimize fuel-economy and gearbox efficiency of latest generation Mercedes-Benz 7-speed automatic transmissions. Not downwards compatible with previous MB-ATF-Specifications. Product dyeing: blue.		MB-APPROVAL 236.15	
<b>TITAN ATF 6000 SL</b>	Premium Performance ATF offering maximum performance in passenger car applications such as automatic transmissions with torque converters or wet clutches as well as power steering systems. Formulation is licensed according to DEXRON VI and downwards compatible to any former DEXRON-specification. Product dyeing: red.		DEXRON VI VOITH H55.6335.xx ZF TE-ML 09	BMW 81 22 9 400 272 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 9 407 858 BMW 83 22 9 407 859
<b>TITAN ATF 5005</b>	Premium Performance ATF for automatic transmission in motor vehicles. Outstanding base oil quality for optimal cold temperature properties and high ageing stability. Durable friction properties for excellent wet clutch performance. Product dyeing: red.		MAN 339 TYPE V2 MAN 339 TYPE Z2 MB-APPROVAL 236.6 VOITH H55.6336.xx ZF TE-ML 04D, 14B, 16L, 17C	DEXRON III (H) ALLISON TES 295 ALLISON TES 389 BMW 81 22 9 400 272 BMW 81 22 9 400 275 BMW 83 22 0 403 248 BMW 83 22 9 407 738 BMW 83 22 9 407 807 BMW 83 22 9 407 858 BMW 83 22 9 407 859 FORD MERCON V MAN 339 TYPE Z3 OPEL 19 40 707 VOLVO 97341 VW TL 521 62 (G 052 162) ZF TE-ML 02F, 11B, 14C

## 2\_TRANSMISSION FLUIDS



**TITAN**

Automatic Transmission Fluids (ATF)		Specifications	Approvals	FUCHS Recommendations
<b>TITAN ATF 4400</b>	Ultra High Performance ATF specifically formulated for Japanese passenger cars and light commercial vehicles. The high torque capacity exceeds the performance of many original fluids. Product dyeing: red.	JASO M315 TYPE 1A		DEXRON III AISIN WARNER/AW-1 BMW MINI 83 22 0 402 413 BMW MINI 83 22 7 542 290 CHRYSLER ATF +3/+4 DAEWOO DAIHATSU ALUMIX ATF MULTI FIAT TYPO T-IV FORD MERCON FORD M2C924-A/ M2C922-A1 GM 9986195 HONDA ATF Z-I HYUNDAI SP III, SP IV ISUZU BESCO ATF -II/ATF -III JATCO 3100 PL085/FWD (N402)/JF506E (K17) JWS 3309/TYPET-IV KIA SP-IV MAZDA ATF D-III/ATF M-3 MITSUBISHI SP-II-III NISSAN MATIC C/D/J/S SAAB 3309 SUBARU ATF OIL/ATF OIL SPECIAL/ATF HP SUZUKI ATF 3309/3317 TOYOTA TYPE T/T-II/T-III/T-IV TOYOTA TYPE D-2/WS VW G 052 990/055 025
<b>TITAN ATF 4134</b>	Ultra High Performance ATF, specially developed to optimize shifting performance of Mercedes-Benz automatic transmissions. Product dyeing: red.		MB-APPROVAL 236.14 SSANG YONG (MB-automatic transmissions)	
<b>TITAN ATF 4000</b>	Ultra High Performance ATF for use in automatic transmissions as well as other ATF applications. Licensed according to DEXRON III (H). Improved low-temperature shifting compared to DEXRON II. Product dyeing: red.		ALLISON C-4 ALLISON TES-389 DEXRON III (H) MAN 339 TYPE V1 MAN 339 TYPE Z1 MB-APPROVAL 236.1 MB-APPROVAL 236.9 VOITH H55.6335.xx VOLVO 97341 ZF TE-ML 04D, 14A	BMW 81 22 9 400 272 BMW 81 22 9 400 275 BMW 81 22 9 407 738 BMW 83 22 0 403 248 BMW 83 22 9 407 765 BMW 83 22 9 407 807 BMW 83 22 9 407 858 BMW 83 22 9 407 859 CAT TO-2; FORD MERCON OPEL 19 40 707 / 767 VW TL 521 62 (G 052 162) ZF TE-ML 02F, 03D, 09, 11B, 17C

## 2\_TRANSMISSION FLUIDS



**TITAN**

Automatic Transmission Fluids (ATF)		Specifications	Approvals	FUCHS Recommendations
<b>TITAN ATF CVT</b>	Ultra High Performance ATF specially designed for use in many CVT-gearboxes using push-belts or transmission chains made of steel. Product dyeing: none.		MB-APPROVAL 236.20 FORD WSS-M2C928-A	BMW 83 22 0 136 376 BMW 83 22 0 429 154 CHRYSLER CVTF+4 DAIHATSU AMIX CVTF-DC DODGE/JEEP NS-2/ CVTF+4 FORD WSS-M2C933-A GM DEX-CVT HONDA HCF-2 MITSUBISHI CVTF-J1 NISSAN NS-1/NS-2/NS-3 SUBARU Lineartronic CVTF/ECVT/iCVT SUZUKI TC/NS-2/CVT Green 1 TOYOTA TC/CVT FE VW TL 521 80 (G 052 180) VW TL 525 16 (G 052 516)
<b>TITAN ATF 3353</b>	Ultra High Performance DEXRON III-generation-ATF for automatic transmissions as well as any other ATF-applications. Developed for the MB automatic transmissions and transfer cases according manufacturer. Offers fuel-efficiency potential. Product dyeing: red.		MB-APPROVAL 236.12 VW TL 525 33 (G 052 533)	DEXRON III BMW 83 22 9 407 765 FORD M2C195-A FORD M2C202-B FORD M2C922-A1 SSANG YONG
<b>TITAN ATF 3000</b>	Super High Performance DEXRON II (D) ATF for automatic transmissions in commercial vehicles, machinery and passenger cars according to manufacturer's documentation. Product dyeing: red.		MAN 339 TYPE V1 MAN 339 TYPE Z1 MB-APPROVAL 236.1 VOITH H55.6335.xx ZF TE-ML 04D, 14A	DEXRON II (D) ALLISON C-4 BMW 81 22 9 400 272 BMW 81 22 9 400 275 BMW 81 22 9 407 738 CAT TO-2; FORD MERCON FORD M2C185-A FORD M2C138-CJ FORD M2C166-H FORD M2C9010-A OPEL 19 40 700 / 707 RENK-DOROMAT VOLVO; VW ZF TE-ML 02F, 03D, 09, 11A, 17C
<b>TITAN ATF 10</b>	High Performance ATF for transmissions, power steering systems and hydraulic drives which require a GM-specification TYPE A, Suffix A fluid. Product dyeing: red.		MB-APPROVAL 236.2	TASA MAN 339 TYPE A

## 3\_HYDRAULIC FLUIDS



**TITAN**

Central Hydraulic / Power Steering Fluids		Specifications	Approvals	FUCHS Recommendations
<b>TITAN ZH 4300 B</b>	Premium Performance Central Hydraulic Oil formulated with fully-synthetic base oils. Product dyeing: green.		MAN M 3289	BMW 81 22 9 407 758 BMW 82 11 1 468 041 BMW 83 29 0 429 576 FENDT X 902 011 622 FORD M2C204-A OPEL 19 40 715 / -766 PORSCHE 000 043 203 33 PSA S712710 VOLVO 1161529 VW TL 521 46 (G 002 000)
<b>TITAN ZH 5364 B</b>	Premium Performance Central Hydraulic Oil approved by Mercedes-Benz for level control systems in passenger cars formulated with fully-synthetic base oils. Product dyeing: none.		MB-APPROVAL 344.0	
<b>TITAN ZH 3044</b>	Ultra High Performance power steering and central hydraulic oil for automotive applications. Product dyeing: green.		CHRYSLER MS-11655b VW TL 52519-B	AUDI/VW G 004 000 GMW 16613 LAND ROVER LR003401 OPEL 19 40 715 PORSCHE 000 043 206 56 SAAB 93160548 VOLVO 30741424
<b>TITAN ZH LHM PLUS</b>	Ultra High Performance Central Hydraulic Oil specially designed for the use in Citroën and Peugeot vehicles. Product dyeing: green.			ISO 7308 BMW 81 22 9 407 549 CASE FIAT 9.55597 IVECO 18-1823 MASSEY FERGUSON NH 610A PSA B71 2710 SDFG OF1611S
<b>TITAN PSF</b>	Super High Performance Power Steering Fluid approved by Mercedes-Benz for passenger cars and commercial vehicles. Product dyeing: none.		MB-APPROVAL 236.3	

Hydraulic Oils		Specifications	Approvals	FUCHS Recommendations
<b>TITAN HYD MR 530 MC</b>	Ultra High Performance multigrade hydraulic oil for construction machinery as well as diverse motor vehicle applications.	HVLPD covers SAE 5W to 30 or ISO VG 22-68 (100)		
<b>TITAN HYD 1030</b>	Super High Performance multigrade hydraulic oil for general machinery and motor vehicle applications.	HVLP according to DIN 51 524-3 HV according to ISO 11158	DENISON HF 0	CASE MS 1216



## 4\_LUBRICANTS FOR AGRICULTURAL MACHINERY



**AGRIFARM**

AGRIFARM STOU Oils	Specifications	Approvals	FUCHS Recommendations
<p><b>AGRIFARM STOU MC PRO SAE 10W-40</b></p>	<p>Ultra High Performance Multifunctional Oil (STOU/MFO) of the latest generation for agricultural vehicles.</p>	<p>SAE J300: SAE 10W-40</p>	<p>DEUTZ DQC III-10</p> <p>ACEA E7(E5/E3),E4, API CI-4, API GL-3/GL-4/API GL-5 in tractors* MAN 3275 AFNOR NFE 48603 HV, ALLISON C-4 CASE MS 1207, 1209, 1210, 1230, CNH MAT 3505, 3509, 3525, 3526 DIN 51524-3: HVLP (-D) FNHA 2C-200.00, 201.00 FORD M2C48-C3, M2C86-B, M2C134-D, M2C159-B/C JOHN DEERE JDM J20C NEW HOLLAND 82009201/2/3 NH 030C, 330G, 330H, 410B, 420A, 526C MASSEY FERGUSON CMS M 1145, 1144, 1143, 1139, 1135 ZF TE-ML 06A, 06B, 06C, 06F, 06L, 07B * without HOLMER</p>
<p><b>AGRIFARM STOU MC SAE 10W-30</b></p>	<p>MC-synthesis Super High Performance Multifunctional Oil (STOU/MFO) for engines, manual gearboxes, wet brakes, hydraulics and turbo-drives in tractors and other agricultural machinery.</p>	<p>API CG-4 API GL-4 SAE J300: SAE 10W-30</p>	<p>DEUTZ DQC I-02 ZF TE-ML 06B, 06F, 07B</p> <p>AFNOR NFE 48603 HV DIN 51524-3: HVLP (-D) ACEA E3 ALLISON C-4 CASE MS 1207, 1209, 1210, 1230 CNH MAT 3505, 3509, 3525, 3526 FORD M2C48-C3, M2C86-B, M2C134-D, M2C159-B/C JOHN DEERE JDM J20 C NEW HOLLAND 82009201/2/3 NH 410B, 420A MASSEY FERGUSON CMS M 1145, 1144, 1143, 1139, 1135 SAE J306: SAE 75W-80 ZF TE-ML 06A, 06C</p>

## 4\_LUBRICANTS FOR AGRICULTURAL MACHINERY



**AGRIFARM**

AGRIFARM STOU Oils		Specifications	Approvals	FUCHS Recommendations
<b>AGRIFARM STOU MC SAE 10W-40</b>	Super High Performance Multifunctional Oil (STOU / MFO) based on MC-base-oil technology for engines, manual gearboxes, wet brakes, hydraulics and turbo-drives in tractors and other agricultural and other commercial vehicles.	API CG-4 API GL-4 SAE J300: SAE 10W-40	DEUTZ DQC I-02 FENDT KDM 41.2011 ZF TE-ML 06B, 06F, 07B	API GL-5 in tractors* ACEA E3 MAN 271 AFNOR NFE 48603 HV, ALLISON C-4 CASE MS 1207, 1209, 1210, 1230, CNH MAT 3505, 3509, 3525, 3526 DIN 51524-3: HVLP (-D) FORD M2C134-D, M2C159-B/C FNHA 2C-200.00, 201.00, FORD M2C48-C3, M2C-86 B JOHN DEERE JDM J20C NEW HOLLAND 82009201/2/3 NH 030C, 330G, 410B, 420A, 526C MASSEY FERGUSON CMS M 1145, 1144, 1143, 1139, 1135 SAE J306: SAE 75W-90 ZF TE-ML 06A, 06C, 06L * without HOLMER
<b>AGRIFARM STOU SAE 15W-30</b>	High Performance Multifunctional Oil (STOU / MFO) for engines, manual gearboxes, wet brakes, hydraulics in tractors and other agricultural equipment.	API CF-4 API GL-4		ACEA E2 CNH MAT 3525, 3526 DIN 51524 : HLP (-D) FNHA 200.00, 201.00 FORD M2C134-D, M2C159-B/C JOHN DEERE JDM J20C MASSEY FERGUSON CMS M 1145, 1144, 1143, 1139, 1135 NEW HOLLAND 82009201/2/3; NH 420A SDFG OU 1391, OT 1891 STEYR D-401 ZF TE-ML 06A, 06B, 06C, 07B
<b>AGRIFARM STOU SAE 15W-40</b>	High Performance Multifunctional Oil (STOU / MFO) for engines, manual gearboxes, wet brakes, hydraulics in tractors and other agricultural equipment.	API CF-4 API GL-4	FENDT KDM 41.2011	ACEA E2 CNH MAT 3525, 3526 DIN 51524 : HLP (-D) FNHA 200.00, 201.00 FORD M2C134-D, M2C159-B/C JOHN DEERE JDM J20C MASSEY FERGUSON CMS M 1145, 1144, 1143, 1139, 1135 NEW HOLLAND 82009201/2/3; NH 420A SDFG OU 1391, OT 1891 STEYR D-401 ZF TE-ML 06A, 06B, 06C, 07B

## 4\_LUBRICANTS FOR AGRICULTURAL MACHINERY



**AGRIFARM**

AGRIFARM Engine Oils		Specifications	Approvals	FUCHS Recommendations
<b>AGRIFARM MOT SAE 10W-40</b>	Ultra High Performance Engine Oil of the latest conception of the SAE grade 10W-40. It was developed for advanced diesel engines which made high demands on service intervals and engine cleanliness. Specially recommended for normally aspirated and turbocharged engines.	ACEA E7 API CI-4 GLOBAL DHD-1 JASO DH-1		ALLISON C-4 CAT ECF-2 CUMMINS CES 20071/2/6/7/8 DAF DEUTZ DQC III MACK EO-M PLUS MAN M 3275-1 MTU DDC TYPE 2 RENAULT RLD / RLD-2 VOLVO VDS-3
<b>AGRIFARM MOT SAE 15W-40</b>	Super High Performance Engine Oil for normally aspirated and turbocharged diesel engines in tractors and other machinery which make high demands on service intervals and engine cleanliness.	ACEA E7 API CI-4 GLOBAL DHD-1 CAT ECF-1a/ECF-2	DEUTZ DQC III	ALLISON C-4 CAT TO-2 CASE MS 1121 CUMMINS CES 20071/2/6/7/8 DAF IVECO 18-1804 CLASSE T2 E7 MACK EO-M PLUS MAN M 3275-1 MTU DDC TYPE 2 NH 330H RENAULT RLD/RLD-2 STEYR A-201 VOLVO VDS-3

## 4\_ LUBRICANTS FOR AGRICULTURAL MACHINERY



**AGRIFARM**

AGRIFARM UTTO Oils		Specifications	Approvals	FUCHS Recommendations
<b>AGRIFARM UTTO MP</b>	Super High Performance Multifunctional Oil (UTTO/MFO) for use in transmission and hydraulic systems with integrated wet brakes, clutches and differentials for agricultural and construction machinery.	API GL-4 SAE J300: 10W-30	ZF TE-ML 03E, 05F, 17E, 21F	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 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 J306: 75W-80 SDFG OT 1891 A VALTRA G02-08 ZF TE-ML 06K
<b>AGRIFARM UTTO LN</b>	Super High Performance Transmission-Hydraulic Fluid developed as a problem-solver for tractors in which conventional UTTO oils led to noisy wet brakes.	API GL-4 SAE J300: 20W-30		AGCO Powerfluid 821 XL AGCO Q-186 (Whitefarm) ALLISON C-4 CASE MS 1206, 1207, 1209, 1210, 1230 CNH MAT 3505, 3506, 3509, 3525, 3526 FNHA-2-C-200.00 / -201.00 FORD M2C48C3, ESN M2C86-B/C, M2C134-D JOHN DEERE JDM J20C MASSEY FERGUSON CMS M 1141, 1135 SAE J306: 80W-85 CLAAS / LANDINI / SAME-Transmission / DEUTZ-FAHR FENDT (non Vario)

## 4\_LUBRICANTS FOR AGRICULTURAL MACHINERY



**AGRIFARM**

AGRIFARM Gear Oils		Specifications	Approvals	FUCHS Recommendations
<b>AGRIFARM GEAR SAE 80W-90</b>	Super High Performance Multigrade Gear Oil for synchromesh and non-synchromesh gearboxes as well as axles, power distributors, intermediary and auxiliary gearboxes in vehicles and machinery.	API GL-4/GL-5	ZF TE-ML 05A, 21A	MIL-L-2105 D NH 520A STEYR B-101
<b>AGRIFARM GEAR SAE 85W-140</b>	Super High Performance Multigrade Gear Oil for synchromesh and non-synchromesh gearboxes as well as axles, power distributors, intermediary and auxiliary gearboxes in vehicles and machinery.	API GL-4/GL-5	ZF TE-ML 05A, 21A	MIL-L-2105 D
<b>AGRIFARM GEAR LS SAE 90</b>	Super High Performance EP Gear Oil for axles fitted with limited-slip differentials in agricultural and other machinery.	API GL-5		NH 520B SDFG OP 1705LS VOLVO 97310 ZF TE-ML 05C, 12C, 16E

AGRIFARM Chain Saw Oil		Specifications	Approvals	FUCHS Recommendations
<b>AGRIFARM CHAIN SAW OIL</b>	Super High Performance Chain Saw Oil specially developed for all chain saws with pressurized chain oiling.			DOLMAR HUSQVARNA SOLO STIHL

AGRIFARM Milking Machine Oil		Specifications	Approvals	FUCHS Recommendations
<b>AGRIFARM MILKING MACHINE OIL</b>	Ultra High Performance Milking Machine Oil specially developed for use in the vacuum pumps of milking machines. It contains additives which protect against wear and corrosion and foaming. These features increase the functional reliability of such systems.			ALFA LAVAL WESTFALIA

## 5\_ MOTORCYCLE LUBRICANTS



**Silkolene**

RACE – For professional racers and everybody who rides at the limit		Specifications	Approvals	FUCHS Recommendations
<b>SILKOLENE PRO R SAE 0W-20</b>	<b>Electrosyntec® -Technology</b> Fully-synthetic four-stroke racing engine oil based on the latest Electrosyntec-Technology. Special racing formulation. Only for professional competition applications.			
<b>SILKOLENE PRO 4 PLUS SAE 5W-40 SAE 10W-50</b>	<b>Electrosyntec® -Technology</b> Four-stroke racing engine oil based on synthetic esters. Specially formulated for use in Superbikes, Supersports and production racers.	API SG/SH/SJ/SL	JASO MA2	
<b>SILKOLENE PRO 4 SAE 10W-40 XP SAE 15W-50 XP SAE 10W-60 XP</b>	Premium Performance Engine Oil	API SM/SN	JASO MA2	
<b>SILKOLENE PRO KR2</b>	Two-stroke race cart oil formulated with synthetic base oils and castor oil. Use manufacturer's recommended mixing ratios. Not miscible with other lubricants.		CIK-FIA	
<b>SILKOLENE PRO 2</b>	<b>Electrosyntec® -Technology</b> Fully-synthetic two-stroke racing engine oil. Specially formulated for extreme conditions. Not miscible with conventional two-stroke oils. Only suitable for Premix systems.		CIK-FIA	
<b>SILKOLENE COMP 2 PLUS</b>	<b>Electrosyntec® -Technology</b> Fully-synthetic two-stroke racing engine oil. Perfect for GP racing engines. Suitable for Premix and Autolube systems.	API TC JASO FC ISO-L-EGD		
<b>SILKOLENE RSF 2.5/5/7.5/10/15</b>	Fully-synthetic shock-absorber fluids and special fork oils with a high viscosity index. Specially developed for racing.			
<b>SILKOLENE PRO CHAIN</b>	Fully-synthetic racing chain lube spray for high-performance road, racing and motocross applications. For all chains with or without O-rings.			

# 5\_MOTORCYCLE LUBRICANTS



*Silkolene*

RIDE – For the tourer and streetrider		Specifications	Approvals	FUCHS Recommendations
<b>SILKOLENE COMP 4</b> SAE 10W-30 XP SAE 10W-40 XP SAE 15W-50 XP SAE 20W-50 XP	Ultra High Performance Engine Oil	API SL	JASO MA2	
<b>SILKOLENE SUPER 4</b> SAE 15W-40	Four-stroke engine oil formulated with selected base oils. Specially for use in BMW motorcycles with and without wet clutches.	API SF/SG		BMW Motorrad JASO MA
<b>SILKOLENE SUPER 4</b> SAE 10W-40	MC-synthesis four-stroke engine oil. High-quality standard product offering excellent protection.	API SF/SG/SH	JASO MA2	
<b>SILKOLENE SUPER 4</b> SAE 20W-50	MC-synthesis four-stroke engine oil. High-quality standard product offering excellent protection.	API SF/SG	JASO MA2	
<b>SILKOLENE V-TWIN</b> SAE 20W-50	Mineral four-stroke engine oil. Specially developed for Harley-Davidson and European/Japanese Metric V-Twins.	API CF/SG/SH/SJ	JASO MA2	
<b>SILKOLENE COMP 2</b>	<b>Electrosyntec® -Technology</b> Synthetic two-stroke engine oil. Reliable protection against seizures, ring sticking and coking. Suitable for Premix and Autolube systems.	API TC JASO FC/FD ISO-L-EGD		

QUADS ATV – For professionals and fun bikers		Specifications	Approvals	FUCHS Recommendations
<b>SILKOLENE QUAD ATV</b> SAE 5W-40	Fully-synthetic four-stroke engine oil for highly-stressed Quads and ATVs. Offers first-class quality and reliable protection against wear.	API SG/SH/SJ/SL	JASO MA2	
<b>SILKOLENE QUAD ATV</b> SAE 10W-40	MC-synthesis four-stroke engine oil specially developed for Quads and ATVs. Standard, high-quality product for reliable protection.	API SG/SH/SJ	JASO MA2	

SCOOT – The name says it all		Specifications	Approvals	FUCHS Recommendations
<b>SILKOLENE SCOOT 4</b> SAE 10W-40	<b>Electrosyntec® -Technology</b> Synthetic four-stroke engine oil for scooters and mopeds. Perfect for high-tech, four-stroke scooters.	API SG/SH/SJ	JASO MA2	
<b>SILKOLENE SCOOT SPORT 2</b>	<b>Electrosyntec® -Technology</b> Synthetic two-stroke engine oil for highly-stressed scooter engines. Suitable for Premix and Autolube systems.	API TC JASO FC/FD ISO-L-EGD		
<b>SILKOLENE SCOOT 2</b>	MC-synthesis two-stroke engine oil for scooters and mopeds. Suitable for Premix and Autolube systems.	API TC JASO FC		

## 5\_MOTORCYCLE LUBRICANTS



**Silkolene**

MAINTAIN – Maintenance and protection for your bike	Specifications	Approvals	FUCHS Recommendations
<b>SILKOLENE PRO SRG 75</b>	Fully-synthetic, ester-based racing gear oil. Excellent protection against wear and easy shifting even at extreme temperatures.		
<b>SILKOLENE COMP GEAR OIL SAE 80W-90</b>	Synthetic, High Performance, ester-based gear oil. Particularly recommended when the gearbox contains aluminium components.	API GL-4/GL-3	
<b>SILKOLENE BOA SAE 80W-90</b>	High Performance gear oil for shaft drives and other hypoid, crown wheel and pinion applications.	API GL-5/GL-4	
<b>SILKOLENE MAG COOL</b>	Ready to use, powerful engine coolant for all year round use. Anti-cavitation performance exceeds that of conventional ethylene glycol based anti-freezes, providing the user with superior protection against engine and coolant pump damage due to this phenomenon.		
<b>SILKOLENE SF 20 / 30</b> <b>NEW</b>	Fork oils for all types of motorcycle forks. Ensures smooth operation, optimum protection against wear and perfect road-holding.		
<b>SILKOLENE FOAM FILTER OIL</b>	Special product for the oiling of freshly-washed foam filters. Also available as a spray.		
<b>SILKOLENE FOAM FILTER CLEANER</b>	Special water-soluble cleaner used to wash foam filter elements.		
<b>SILKOLENE TITANIUM DRI GEL</b>	Advanced chain lubricating gel: Effectively resists fling-off and appears whitish when applied.		
<b>SILKOLENE CHAIN LUBE</b>	Synthetic chain lube spray for optimum wear and rust protection. For all motorcycle chains with or without O-rings.		
<b>SILKOLENE BRAKE &amp; CHAIN CLEANER</b>	Highly effective cleaner for brakes and drive chains. Effectively removes caked residue.		
<b>SILKOLENE CARB CLEANER</b>	Carburettor cleaner spray.		
<b>SILKOLENE PRO PREP</b>	Special conditioning spray for plastics and painted surfaces restores the „brand-new“ look.		
<b>SILKOLENE PRO WASH</b>	Rapidly biodegradable, highly-effective motorcycle cleaner for all surfaces including aluminium. Available in 1-litre pump-bottles or in 25 litre drums.		
<b>SILKOLENE ALL-IN-ONE</b>	Multipurpose maintenance spray with a multitude of uses: SILKOLENE ALL-IN-ONE can be used to dry out damp ignitions or free rusted fasteners. It has excellent dewatering properties, repels moisture, penetrates corroded threads, lubricates and even offers protection against corrosion.		



## 5\_ MOTORCYCLE LUBRICANTS



*Silkolene*

MAINTAIN – Maintenance and protection for your bike	Specifications	Approvals	FUCHS Recommendations
<b>SILKOLENE SILKOPEN</b>	A suspension of very fine lubricating graphite in a thin searching mineral oil carrier. SILKOLENE SILKOPEN penetrates corroded or seized threads, lubricates them at the same time to ease dismantling by lowering the torque required.		
<b>SILKOLENE PRO BOOST</b>	Octane improver to combat pre-ignition and improve acceleration.		

## 6\_SERVICE PRODUCTS



### MAINTAIN

Brake Fluids		Specifications	Approvals	FUCHS Recommendations
<b>MAINTAIN DOT 5.1</b>	Ultra High Performance Brake Fluid for hydraulic brake systems and clutch actuation in passenger cars, trucks and motorcycles.	FMVSS NR. 116 DOT 5.1 ISO 4925 CLASS 3/4/5.1 SAE J 1703/J 1704		
<b>MAINTAIN DOT 4</b>	Super High Performance Brake Fluid for hydraulic brake systems and clutch actuation in passenger cars, trucks and motorcycles.	FMVSS NR. 116 DOT 3/DOT 4 ISO 4925 CLASS 3/4 SAE J 1703/J 1704		FORD M6C62-A FORD M6C9103-A NH 800A OPEL 19 42 421

Antifreeze		Specifications	Approvals	FUCHS Recommendations
<b>MAINTAIN FRICOFIN LL</b>	Premium Performance Coolant Additive based on monoethylene glycol. Free from nitrite, amine, phosphate and silicates. Product dyeing: orange	ASTM D 3306 TYPE I BS 6580 FORD WSS-M97-B44-D JAGUAR/LAND-ROVER STJLR.651.5003 FVV Heft R443 KSM 2142 UNE 26-361-88/1	Bez.Reg.Arnsgb. E62.12.22.64-2011-1 DAF 74002 DEUTZ DQC CB-14 MAN 324 TYPE SNF MB-APPROVAL 325.3 MWM TR 0199-99-2091	AFNOR NFR 15-601 TYPE I ASTM D 4985 SAE J1034 CHRYSLER MS 12106 CNH MAT 3624 CUMMINS (ISBe engines at DAF and Leyland) DETROIT DIESEL 93K217 FIAT 9.55523 GM 6277M HYUNDAI MS 591-08 JASO M325 JIS K2234 KOMATSU AF-NAC (ready mix) LIEBHERR MD 1-36-130 NATO S-759 PSA B 71 5110 RENAULT TYPE D TOYOTA TSK 2601G-8A VW TL 774 D/F (different colour) VOLVO 128 6083/002 (=VOLVO TRUCKS, VOLVO CE, from MY 2005)
<b>MAINTAIN FRICOFIN V</b>	Ultra High Performance Coolant Additive based on Monoethyleneglycol. Free of nitrites, amines and phosphates. Product dyeing: pink-violet.		VW TL 774 J (G13)	
<b>MAINTAIN FRICOFIN DP</b>	Ultra High Performance Coolant Additive based on monoethylene glycol. Free from nitrite, amine and phosphate. Product dyeing: pink-violet.	AFNOR NF R 15-601 TYPE 1 ASTM D 3306 TYPE I ASTM D 4985 BS 6580 CUMMINS CES 14603	DEUTZ DQC CC-14 MAN 324 TYPE Si-OAT MB-APPROVAL 325.5 MB-APPROVAL 325.6	SCANIA TB 1451 VW TL 774-G
<b>MAINTAIN FRICOFIN DP -35</b> <b>NEW</b>	Ultra High Performance Coolant Ready-Mix based on monoethylene glycol. Offers frost protection down to -35°C. Free from nitrite, amine and phosphate. Product dyeing: pink-violet	AFNOR NF R 15-601 TYPE 3 ASTM D 3306 TYPE III ASTM D 4985 BS 6580 CUMMINS CES 14603	DEUTZ DQC CC-14 MB-APPROVAL 326.5 MB-APPROVAL 326.6	MAN 324 TYPE Si-OAT SCANIA TB 1451 VW TL 774-G

## 6 SERVICE PRODUCTS



### MAINTAIN

Antifreeze		Specifications	Approvals	FUCHS Recommendations
<b>MAINTAIN FRICOFIN HDD</b>	Ultra High Performance Engine Coolant concentrate based on monoethylene glycol. Free of amines and phosphates with low silicate technology. Product dyeing: yellow.	ASTM D 3306 TYPE I ASTM D 4985 ASTM D 6210 TYPE I-FF ASTM D 7583 AS/NZS 2008:2004 TYPE A BS 6580 CHRYSLER MS 7170 CHRYSLER MS 9769 DETROIT DIESEL 7SE298 FORD ESE-M97B44-A FORD ESE-M97B18-C FORD WSS M97B51-A1 GM 1825M & GM 1899M JIS K2234 MACK 014GS17004	MTU MTL 5048	CASE MS 1710 CAT EC-1 CUMMINS CES 14603 DETROIT DIESEL 93K217 (NOAT) FREIGHTLINER 48-2288D IVECO 18-1830 KENWORTH R026-170-97 MAN 324 TYPE N NEW HOLLAND WSN-M97B18-D PACCAR CS 0185 TOYOTA Motor Corp. RP 329
<b>MAINTAIN FRICOFIN</b>	Super High Performance Coolant Additive based on monoethylene glycol. Free from nitrite, amine and phosphate. Product dyeing: blue-green.	AFNOR NF R 15-601 TYPE 1 ASTM D 3306 TYPE I ASTM D 4985 BS 6580:1992 BUNDESWEHR TL 6805-0038/1 SAE J1034	BMW GS 94000 (BMW N 600 69.0) DEUTZ DQC CA-14 JENBACHER TA 1000-0201 MAN 324 TYPE NF MAN 324 TYPE NF PRITARDER MB-APPROVAL 325.0 MTU MTL 5048 MWM TR 0199-99-2091 PN-C 40007:2000 VOITH TURBO 172.00225010	DAF 74001 LIEBHERR TLV 035/TLV 23009 A OPEL/GM B 040 0240 VW TL 774-C (G 11)
<b>MAINTAIN FRICOFIN -35</b>	Super High Performance Coolant Ready-Mix based on monoethylene glycol. Offers frost protection down to -35°C. Free from nitrite, amine and phosphate. Product dyeing: green.	AFNOR NF R 15-601 TYPE 3 ASTM D 3306 TYPE III ASTM D 4985 BS 6580:1992	DEUTZ DQC CA-14 MB-APPROVAL 326.0	BMW GS 94000 (BMW N 600 69.0) DAF 74001 JENBACHER TA 1000-0201 LIEBHERR TLV 035/TLV 23009 A MAN 324 TYPE NF MAN 324 TYPE NF PRITARDER MTU MTL 5048 MWM TR 0199-99-2091 OPEL/GM B 040 0240 PN-C 40007:2000 VOITH TURBO 172.00225010 VW TL 774-C (G 11)
<b>MAINTAIN FRICOFIN S</b>	High Performance Coolant Additive based on monoethylene glycol. Free from nitrite, amine and phosphate. Product dyeing: light green.	ASTM D 3306 TYPE I BS 6580:1992		

## 6\_SERVICE PRODUCTS



### MAINTAIN

Washer Fluid Additive		Specifications	Approvals	FUCHS Recommendations
<b>MAINTAIN CLEAN SCREEN</b>	All season windscreen washer fluid additive with cleaning and antifreeze properties. Suitable for use with any type of washer nozzle and polycarbonate screens.			

Diesel Fuel Additives		Specifications	Approvals	FUCHS Recommendations
<b>MAINTAIN DIESEL EFFECT</b>	Super High Performance Fuel Additive improving diesel fuel properties for singular as well as constant treatment.			
<b>MAINTAIN GASOLINE PLUS</b>	High Performance Gasoline Additive Concentrate designed to clean the entire fuel system. Recommended for constant use.			
<b>MAINTAIN WINTERFIT</b>	Super High Performance Diesel Fuel and Heating Oil additive to prevent waxing and plugging at low temperatures.			

## 7\_SPECIALTIES



Specialties – Oil Binder		Specifications	Approvals	FUCHS Recommendations
<b>MAINTAIN ABSORPEX</b>	Oil Binder Type III R, chemical binder	Reported by Hygiene Institut Gelsenkirchen MPL		

Specialties - Corrosion Protection Aerosols		Specifications	Approvals	FUCHS Recommendations
<b>ANTICORIT DFG SPRAY</b>	Spray and penetrating oil with MoS <sub>2</sub> solid lubricants. Available as an aerosol spray.			
<b>ANTICORIT 5F SPRAY</b>	Surface protection spray. Available as an aerosol spray.			
<b>ANTICORIT OHK SPRAY</b>	Contact and engine protection spray. Excellent rust protection and good lubricants properties. Can be used as a contact spray. Available as an aerosol spray.			
<b>ANTICORIT BW 366 SPRAY</b>	Corrosion preventive wax spray with effective barrier function. Underfloor and cavity protection.			
<b>ANTICORIT SYNTH SPRAY</b>	Fully-synthetic corrosion dissolving spray with excellent penetrating effect.			
<b>ANTICORIT CPX SPRAY</b>	High Performance corrosion preventive for cavity protection and severe conditions. Also available as an aerosol spray.			
<b>ANTICORIT BW 10 SPRAY</b>	Corrosion preventive wax for protection of moulds, outdoor vehicles, press tools during long term downtimes.			

Specialties – Fitting Products		Specifications	Approvals	FUCHS Recommendations
<b>RENAX GLEITSPRAY</b>	Fitting product. Spray grease for hinges, joints and diverse movable small lubrication applications.			
<b>RENOLIT SI 300 M</b>	Low temperature silicon grease for plastic lubrication and mounting aid of o-rings and sealings.	MSI 2 P-70	VW TL 767 X DBL 6812.10	
<b>RENOLIT CHUCK PASTE</b>	White special paste for the lubrication of threads, screws and chucks, avoids fretting corrosion, NLGI 2-3.			
<b>RENOLIT GL 1</b>	Fitting product. Spray grease for hinges, joints and diverse movable small lubrication applications.			

Specialties – Cleaner		Specifications	Approvals	FUCHS Recommendations
<b>FUCHS MULTICLEAN</b>	Well-proven cleaner for multi purpose application in industries and workshops. Rapidly dislodges oil residues.			

## 8\_GREASES



### RENOLIT

Greases		Specifications	Approvals	FUCHS Recommendations
<b>RENOLIT MP</b>	Standard, multipurpose EP grease. Suitable for low temperatures. -40 °C to +120 °C.	KP 2 K-40 ISO-L-X-DCEB 2	MB-APPROVAL 267.0	
<b>RENOLIT MP PLUS</b> Only available for use in FUCHS system grease guns.	High Performance, multipurpose EP grease for plain and roller bearings with excellent adhesion, optimum corrosion protection and very good ageing stability, -30 °C to +120 °C.	KP 2 K-30 ISO-L-X-CCEB 2		
<b>RENOLIT MP 150</b>	Lithium thickened special grease with high ageing resistance, good EP and low temperature properties, temperature range from -40 °C up to +120 °C.	KP 2 K-40 ISO-L-X-DCEB 2	MB-APPROVAL 267.1	
<b>RENOLIT MP 735</b>	High Performance, multipurpose EP wheel bearing grease. NLGI grade 2, -40 °C to +120 °C.	KP 2 K-40 ISO-L-X-DCEB 2	MAN 283 Li-P 2 VW TL 735 STABILUS 100 15883	
<b>RENOLIT LZR 2 H</b>	Highly adhesive, Premium Performance-quality, long-life EP grease based on lithium soap for all plain and roller bearings as well as central lubrication systems in commercial vehicles and general machinery. Excellent corrosion protection even in the presence of saltwater, -30 °C to +140 °C.	KP 2 N-30 ISO-L-X-CDIB 2	Central lubrication system of BAIER & KÖPPEL LINCOLN and SKF Lubrication Solutions	
<b>RENOLIT LZR 000</b>	Semi-fluid grease for engine vehicle central lubrication systems. Gear grease for gearboxes in municipal machinery. Observe manufacturer's recommendations, -40 °C to +110 °C.	ISO-L-X-DBIB 00-000 GP 00-000 G-40	MAN 283 Li-P 00/000 MB-APPROVAL 264.0 SCHAEFFLER Commercial central lubrication system of LINCOLN and SKF Lubrication Solutions (for trucks)	
<b>RENOLIT FLM 2</b> Also available for use in FUCHS system grease guns. Also in NLGI grade 0 available.	Universal, High Performance grease with solid lubricant additives with excellent wear protection. For the lubrication of commercial vehicles and machinery. Proven under extreme conditions such as in construction machinery, -30 °C to +140 °C.	KPF 2 N-30 ISO-L-X-CDEB 2	MAN 285 Li-PF 2	
<b>RENOLIT RENOLIT LX-OTP 2</b>	Fully synthetic special grease based on lithium complex thickener, containing solid lubricants, -40 °C to +160 °C.		MAN TUC 8080/00	

## 8 GREASES







### RENOLIT

Specialties – Greases		Specifications	Approvals	FUCHS Recommendations
<b>RENOLIT CA-LZ</b> Also available in spray cans as <b>RENOLIT UNIMAX LZ</b> .	Long-term, tacky grease based on a special calcium soap with excellent water resistance, for the lubrication of construction and agricultural machinery, -30°C to +120°C, NLGI 2.	KP 2 K-30 ISO-L-X-CCHB 2		
<b>RENOLIT CX-HT 2</b> Also available for use in <b>FUCHS system grease guns</b> . Also in NLGI grade 0 available.	Special calcium complex soap-based grease containing MoS <sub>2</sub> and graphite for the lubrication of highly-stressed plain bearings at high temperatures. Excellent protection against corrosion and wear. Recommended for the greasing of gear wheels, -20 °C to +200 °C, NLGI grade 2, also available in spray can as <b>RENOLIT UNILOAD</b> .			
<b>RENOLIT POLAR BLACK</b>	Fully synthetic special grease based on lithium soap for the lubrication of high loaded plain and roller bearings. All-season grease for construction and mining machines.			
<b>RENOLIT DURAPLEX EP 2</b> Also available for use in <b>FUCHS system grease guns</b> . Also in NLGI grade 1 and 3 available.	Special grease for the long-term lubrication of plain and roller bearings, such as vehicle clutch-release bearings, highly-stressed construction machinery bearings, etc., -30 °C to +160 °C.	KP 2 P-30 ISO-L-X-CEHB 2		
<b>RENOLIT LX-PEP 2</b> Also in NLGI grade 1-2 and 3 available.	Special grease based on lithium complex soaps for long-life applications. Good corrosion protection, thermally and mechanically stable, specially suitable for wheel bearings of cars and trucks, -30 °C to +150 °C.	KP 2 N-30 ISO-L-X-CDEB 2	MAN 284 Li-H 2 MB-APPROVAL 265.1 SCHAEFFLER DB-Kenndatenblatt 873 499 ZF TE-ML 12 VW TL 52147X INTERPRECISE	

## 9\_RAPIDLY BIODEGRADABLE LUBRICANTS



**PLANTO**

PLANTO Lubricants		Specifications	Approvals	FUCHS Recommendations	
<b>PLANTO MOT SAE 5W-40</b>		Super High Performance SAE 5W-40 Diesel Engine Oil. Rapidly biodegradable and specially recommended for use with alternative Diesel fuels.		ACEA E3/B3 API CG-4 KUBOTA SISU ZETOR	
<b>PLANTOSYN 3268</b>		Environmentally friendly, HVI multigrade hydraulic oil with high temperature stability based on fully-saturated, synthetic esters (HEES), rapidly biodegradable according to OECD 301 B >60%. Awarded the European Eco Label.	ISO 15380: HEES DIN 51524-3: HVLP DIN 51519: ISO VG 46	FENDT O&K BAUMASCHINEN ECO-Label	BOSCH REXROTH AG CAT BF-1 KRAMER ALLRAD PALFINGER SAUER DANFOSS TIMBERJACK VALMET / KOMATSU FOREST PONSSE
<b>PLANTOSYN 3268 ECO</b>		Environmentally friendly, HVI multigrade hydraulic fluid based on partly saturated synthetic esters (HEES), universally applicable, rapidly biodegradable according to OECD 301 B >60%, awarded with the European Eco Label.	DIN 51519: ISO VG 46 ISO 3448: ISO VG 46 DIN 51524-2: HLP DIN 51524-3: HVLP ISO 15380: HEES FENDT: KDM 28/2006	FENDT KDM 28/2006 ECO-Label	
<b>PLANTOHYD 40 N</b>		Environmentally compatible hydraulic and lubricating oil based on natural raw materials with additives to improve oxidation stability and ageing stability. Type HETG acc. to ISO 15380, for mobile and stationary hydraulic equipment. Rapidly biodegradable acc. to OECD 301 B >60%, awarded with the European Eco Label.	ISO 15380: HETG	ECO-Label	
<b>PLANTO HYTRAC PLUS</b>		Biodegradable Super High Performance Multifunctional Oil (UTTO) for tractor gearboxes with or without wet brakes.	SAE 10W-30 SAE 80		Several makes of tractors
<b>PLANTOLUBE KS 32-N</b>		Biodegradable rapeseed oil-based tacky lubricant for chains and other total-loss applications.			
<b>PLANTO TAC 68</b>		Biodegradable Super High Performance Chain Saw Oil based on rapeseed. For professional use in chain saws. Excellent lubricity and good ageing stability. Awarded the European Eco Label.		KWF ECO-Label	DOLMAR HUSQVARNA SOLO STIHL



## 9\_RAPIDLY BIODEGRADABLE LUBRICANTS

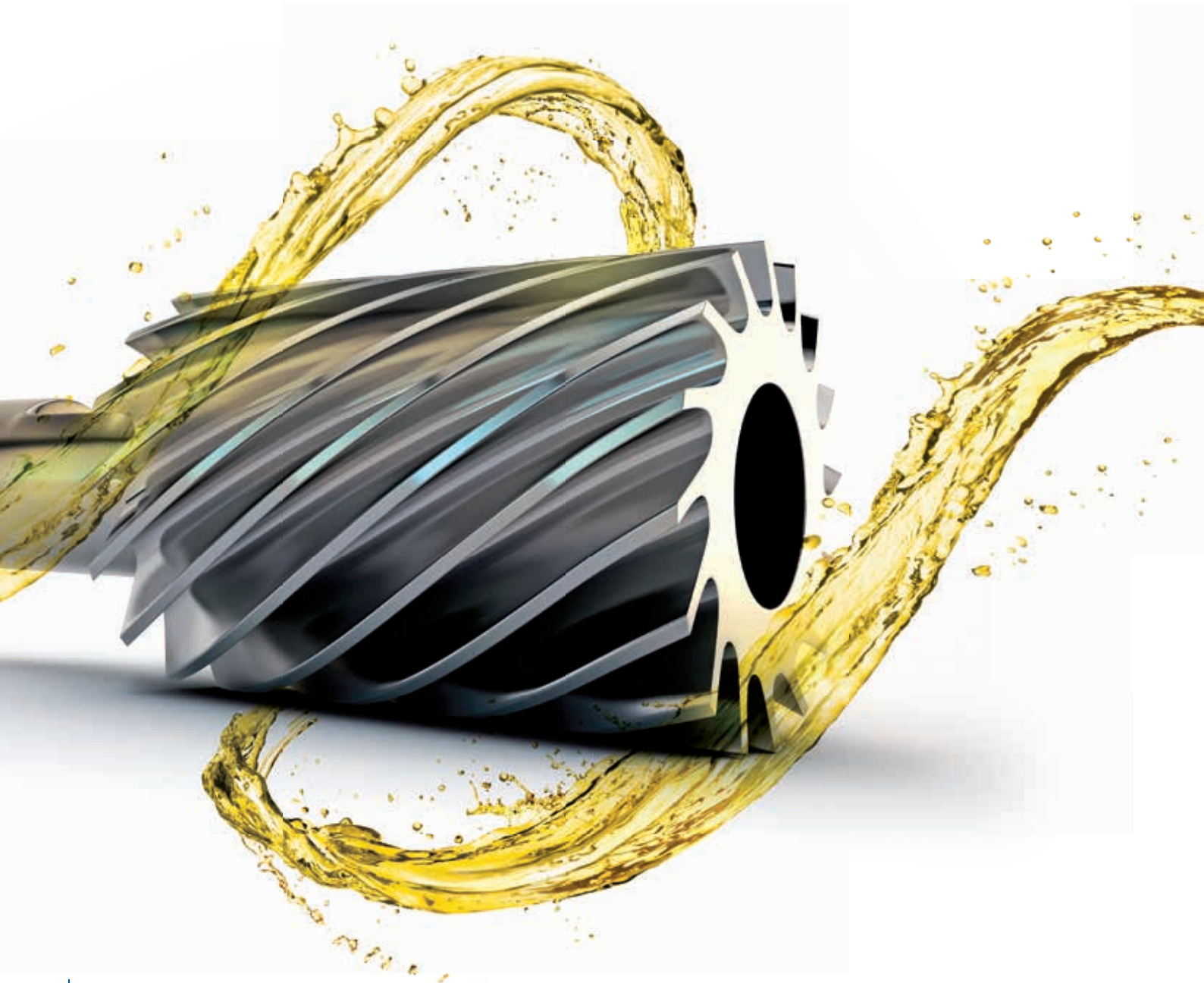


### PLANTO

PLANTO Lubricants		Specifications	Approvals	FUCHS Recommendations
<b>PLANTOGEL 2 FS</b>	Rapidly biodegradable EP grease with graphite additives, -30 °C to +120 °C.	KPFE 2 K-30 ISO-L-X-CCEB 2 DEMATIC RWE		
<b>PLANTOGEL 000 S</b>	Rapidly biodegradable semi-fluid EP grease for central lubrication systems of motor vehicles, industrial machinery and machine tools. Gear grease for gearboxes also in municipal machinery. Observe manufacturer's recommendations, -40 °C to +120 °C.	GPE 00-000 K-40 ISO-L-X-DCEB 00-000	MAN 283 Li-P 00/000 SKF Lubrication Solutions VOLVO	
<b>PLANTOGEL ECO 2 N</b>	Environmentally compatible, rapidly biodegradable total loss lubricating grease based on calcium soap and rape seed oil. Awarded with the EU-Ecolabel, temperature range -20 °C up to +70 °C.		ECO-Label	
<b>PLANTOGEL ECO 2 S</b>	Environmentally compatible, rapidly biodegradable EP-grease based on lithium soap and synthetic esters for the lubrication of plain and roller bearings. Good pumpability in central lubrication systems, awarded with the EU-Ecolabel, temperature range -40 °C up to +120 °C.		ECO-Label	



# Product overview Industrial Lubricants



## **1\_Industrial Lubricants | *RENOLIN , RENISO , PLANTO***

Hydraulic Oils	Page 52 to 53
Gear and General Lubricating Oils	Page 53 to 54
Slideway Oils, Paper Machine Oils	Page 54 to 55
Machine Oils, Cylinder Oils, Turbine Oils, Transformer Oil, Tacky Oils, Heat Transfer Oils	Page 55 to 56
Environmentally Friendly Oils	Page 56 to 57
Compressor and General Lubricating Oils	Page 57
Refrigeration Oils, Lubricants for the Food/Pharma Industry, Gasometer sealing oil	Page 58

## **2\_Greases | *RENOLIT***

Mineral Oil-based Greases for Plain and Roller Bearings	Page 59
Greases based on Synthetic Fluids for Plain and Roller Bearings	Page 59 to 60
Mineral Oil-based Semi-fluid Greases, Silicone Greases	Page 60
Special Greases	Page 61

## **3\_Cutting fluids | *ECOCOOL , ECOCUT***

Water-miscible Cutting Fluids	Page 62 to 63
Emulsion Maintenance	Page 63
Neat, Chlorine-free Cutting Oils, Multifunctional Oils	Page 64

## **4\_Quenching Fluids | *THERMISOL***

Page 65

## **5\_Cleaners | *RENOCLEAN***

Page 66 to 68

## **6\_Forming Lubricants | *RENOFORM***

Page 69

## **7\_Corrosion Protection | *ANTICORIT***

Page 70 to 72



# 1 INDUSTRIAL LUBRICANTS



## RENOLIN

Hydraulic Oils	
<b>RENOLIN DTA-SERIES</b>	Hydraulic and general lubricating oils (machine oils) offering good oxidation resistance and corrosion protection. CL lubricating oils according to DIN 51517-2 and HL hydraulic oils according to DIN 51524-1.
<b>RENOLIN B-SERIES</b>	Lubricating and hydraulic oils with additives to improve ageing resistance, corrosion and wear protection, demulsifying. HLP hydraulic oils according to DIN 51524-2 (B HVI series: DIN 51524-3), ISO 11158-HM.
<b>RENOLIN D-SERIES</b>	Lubricating and hydraulic oils with additives to improve ageing resistance, corrosion and wear protection, detergent/dispersant. HLPD hydraulic oils according to DIN 51524-2, ISO 11158-HM.
<b>RENOLIN MR-SERIES</b>	Universal lubricating and hydraulic oils with additives to improve oxidation and thermal resistance. Excellent corrosion protection, detergent/dispersant. Typical problem solver. HLPD hydraulic oils according to DIN 51524-2, ISO 11158-HM.
<b>RENOLIN MR MC-SERIES</b>	Universal, MC-based lubricating and hydraulic oils. Viscosity Index VI $\geq 150$ . Shear stable. Detergent/dispersant. Allows oil changes to be extended. Typical problem solver in machine tools. HVLPD according to DIN 51524-3, ISO 11158-HV.
<b>RENOLIN ZAF B HT-SERIES</b>	Zinc- and ash-free hydraulic and circulating oils of the latest generation excellent ageing resistance, high corrosion protection, demulsifying. Fulfills and surpasses the specs according to DIN 51524-2 HLP, ISO 11158-HM and DIN 515173 CLP.
<b>RENOLIN ZAF D HT-Series</b>	Universal zinc and ash-free hydraulic fluids and industry gear oils, excellent ageing stability and high wear protection. Provide high deterging and dispersing properties. Pass and surpass the requirements according to DIN 51524-2: HLPD, ISO 6743-4: HM, DIN 51517-3: CLP, ISO 6743-6: CKC, DBL 6713-HLP (Exception: dispersant properties), Bruggen $>30\text{N/m}^2$ .
<b>RENOLIN ZAF D 46 HT PLUS</b>	Universal zinc and ash-free detergent type of hydraulic fluid and industrial gear oil, excellent ageing stability, very high wear protection, latest base oil generation, hydrotreated base oils and low sulphur content. Pass and surpass the requirements according to DIN 51524-2: HLPD, ISO 6743-4: HM, DIN 51517-3: CLP, ISO 6743-6: CKC, DBL 6713-HLPD, Bruggen $>30\text{N/m}^2$ .
<b>RENOLIN ZAF 46 D WHITE</b>	Zinc and ash-free detergent type of EP-lubricating and hydraulic fluid. Due to selected, bright base oils and matched additives the danger of discolorations during formation of oil films is inhibited. Pass and surpass the requirements according to DIN 51524-2: HLP (Exception: dispersant properties), HLPD, ISO 6743-4: HM.
<b>RENOLIN ZAF MC-SERIES</b>	Shear-stable, zinc- and ash-free hydraulic and general lubricating oils with a VI $\geq 150$ . Demulsifying. Formulated with MC base oils. Oil change intervals can be extended. Grades can be rationalised. Fulfil and surpass HVLP hydraulic oil specs according to DIN 51524-3, ISO 11158-HM.
<b>RENOLIN ZAF DT-SERIES</b>	Special zinc- and ash-free hydraulic oils which fulfil Mercedes-Benz specification 6721. Powerful detergent/dispersant properties, particularly good wear protection in boundary friction conditions (Bruggen: 50 N/mm <sup>2</sup> ). HLPD hydraulic oils according to DIN 51524-2, ISO 11158-HV.
<b>RENOLIN MWB-SERIES</b>	Special hydraulic oils with additives to improve ageing stability. Excellent corrosion protection and sludge-transportation properties. Contain a large proportion of EP and anti-wear agents. Zincfree. Good protection in boundary friction conditions. Good Bruggen values ( $> 50\text{N/mm}^2$ ). HLPD hydraulic oils according to DIN 51524-2, ISO 11158-HM approved by SCHULER.
<b>RENOLIN LIFT-SERIES</b>	Special hydraulic oils for elevators and hydraulic conveyors. Reliably combat stick-slip, especially at high loads and low speeds. HLPD hydraulic oils according to DIN 51524-2, ISO 11158-HM.
<b>RENOLIN XtremeTemp</b>	Special hydraulic oil for low start-up temperatures and wide temperature range based on special semi-synthetic base oils and state-of-the-art additive technology. Excellent shear stability. HVLP hydraulic oils according to DIN 51524-3, ISO 11158-HV.
<b>RENOLIN XtremeTemp PLUS</b>	Like RENOLIN XtremeTemp with additives to reduce slick-slip.
<b>RENOLIN PG 32/46</b>	Fully-synthetic hydraulic and lubricating oils based on polyglycols with high VI's. Watersoluble. Fulfil and surpass HVLP hydraulic oil specs according to DIN 51524-3. Not miscible or compatible with mineral oil! Exceed ISO 15380 HEPG. VDMA 24 569 recommendations should be observed.

# 1 INDUSTRIAL LUBRICANTS



## RENOLIN


Hydraulic Oils	
<b>RENOLIN ANTI STICK SLIP</b>	Special hydraulic oil additive combats stick-slip. Reduces friction. Compatible with HLP, HVLP, HLPD and PAO mineral oils.
<b>RENOLIN FST 101</b>	Special hydraulic oil additive designed to simplify the location of hydraulic fluid leaks. Universally compatible with all hydraulic oils (do not use with polyglycol or water containing fluids).
<b>RENOLIN HighPress 46 DLC</b>	High Performance EP hydraulic oil, zinc- and ash-free for Ortinghaus lamellar coupling systems. Excellent detergent and dispersant properties. Fulfills and surpasses HLPD specs according to DIN 51524-2, ISO 11158-HM. High Brugger. Ortinghaus approval (ON 9.2.19).
<b>RENOLIN UNISYN OL</b>	Fully synthetic hydraulic oils based on polyalphaolefines with very good ageing stability, wear protection, good demulsifying properties and viscosity temperature behavior, high VI and excellent air release properties. The products of the RENOLIN UNISYN OL series fulfil the requirements for hydraulic oils HVLP DIN 51524-3.
Hydraulic Oils – Fire-resistant Hydraulic Oils	
<b>HYDROTHERM 46 M</b>	Fire-resistant, Group HFC hydraulic oil according to DIN 51502 and VDMA 24 317. Water glycol fluid. Satisfies the 7th Luxembourg Report. Environmentally harmless, rapidly biodegradable and free of monoethylene glycol. Approved by BOSCH REXROTH for pressures up to 350 bar.
<b>HYDROTHERM 68 LW RED</b>	Fire-resistant, Group HFC-E hydraulic oil based on water glycol. Water content less than 20%, high wear protection.
<b>RENOSAFE TURBO 46 DR</b>	Synthetic, fire-resistant, Group HFD-R hydraulic oil according to DIN 51502 and VDMA 24 317. Based on special hydrolytic stable phosphoric acid esters.
<b>PLANTOFLUX AT-S (ISO VG 46, 68)</b>	Synthetic, fire-resistant, Group HFD-U hydraulic oils according to DIN 51502 and VDMA 24 317. Based on carbonic acid esters (free of chlorinated hydrocarbons and phosphoric acid esters). Rapidly biodegradable, Factory Mutual Approval – USA.
<b>RENOSAFE FireProtect 46 / 68</b>	Fire-resistant hydraulic fluid type HFD-U according to DIN 51502 and ISO 12922 based on synthetic saturated esters. Highest thermal and oxidative stability. Rapidly biodegradable hydraulic oil.
Gear and General Lubricating Oils	
<b>RENOLIN DTA-SERIES</b>	Hydraulic and general lubricating oils with additives to improve ageing stability and corrosion protection. CL lubricating oils according to DIN 51517-2 and HL hydraulic oils according to DIN 51524-1, ISO 12925-1:CKB.
<b>RENOLIN CLP-SERIES</b>	Demulsifying industrial gear oils with good ageing stability and EP performance. RENOLIN CLP oils fulfil and surpass the specifications laid down in ISO 12925-1:CKC, CKD. Excellent protection against micro-pitting. Approved by well-known gear manufacturers.
<b>RENOLIN CLP PLUS-SERIES</b>	Proven, special mineral oil-based gear oils. Friction-reducing and detergent. Outstanding ageing stability. Good protection against micro-pitting. Extended oil change intervals are possible. Approved by well-known gear manufacturers, ISO 12925-1:CKC, CKD.
<b>RENOLIN AWD-SERIES</b>	Special, mineral oil-based gear oils. Friction-reducing and detergent. Outstanding ageing stability. Good protection against micro-pitting. Good Brugger performance: >70 N/mm <sup>2</sup> . CLP-D gear oils according to ISO 12925-1:CKC, CKD.
<b>RENOLIN CLPF SUPER-SERIES</b>	Special raffinates with good ageing stability containing MoS <sub>2</sub> and synergetic EP additives. Mineral oil-based. For highly-loaded gears especially in unfavourable conditions and for applications subject to intermittent and shock loads. Exceed the requirements of CLPF gear oils according to ISO 12925-1:CKC, CKD.

# 1 INDUSTRIAL LUBRICANTS



## RENOLIN

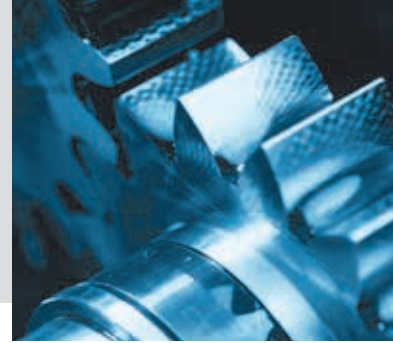
### Gear and General Lubricating Oils

<b>RENOLIN GEAR VCI-SERIES</b>	Special industrial gear oils of the latest generation based on mineral oil with special corrosion protection properties. Reliable long-term corrosion protection in the oil phase as well as in the vapour phase. Excellent wear protection, high scuffing protection, good compatibility with gear oils. Fulfil resp. surpass the requirements for CLP industrial gear oils acc. to DIN 51517-3 (2014): CLP, ISO 6743-6 and ISO 12925-1:CKC / CKD as well as AGMA 9005/E02: EP.
<b>RENOLIN UNISYN GEAR VCI-SERIES</b>	Like RENOLIN GEAR VCI-SERIES based on Polyalphaolefines.
<b>RENOLIN UNISYN CLP-SERIES</b>	Fully-synthetic, PAO-based gear oils with good ageing stability, very high VI and a very low pour point. Excellent protection against micro-pitting. Exceed the requirements of CLP-HC according to ISO 12925-1:CKC, CKD, CKE. Miscible and compatible with mineral oils. Approved by well-known gear manufacturers.
<b>RENOLIN PG-SERIES</b>	Fully-synthetic, polyglycol-based gear oils with the best possible ageing stability and EP properties. Excellent low-temperature behaviour, high VI and very low friction coefficients. Excellent protection against micro-pitting. Exceed the requirements of CLP-PG according to ISO 12925-1:CKC, CKD, CKE, CKT. Not miscible or compatible with mineral oils. Approved by well-known gear manufacturers.
<b>PLANTOGEAR S-SERIES</b> 	Rapidly biodegradable, environmentally friendly high performance gear oils based on saturated synthetic esters. Excellent tribological properties. Exceed the requirements of CLP-E according to ISO 12925-1:CKC, CKD, CKE. Approved by well-known gear manufacturers. Awarded the European environmental seal.
<b>RENOLIN MORGEGEAR-SERIES</b>	Special lubricating and gear oils with good demulsifying properties and „light“ anti-wear additives. For the lubrication of Morgoil bearings in steel and rolling mills. (Meet the requirements of Danieli and SMS).
<b>RENOLIN HighGear-SERIES</b>	Special gear oils with state-of-the-art additive technology based on mineral oil and synergetic working additives (PD – plastic deformation technology). Excellent wear protection performance also under strong frictional stress. Surpasses the requirements of ISO 12925-1:CKC, CKD, CKE.
<b>RENOLIN HighGear Synth-SERIES</b>	Special gear oils with state-of-the-art additive technology based on PAO and synergistically acting Plastic Deformation (PD) additives. Excellent wear protection performance also under strong frictional stress (lifetime extension possible). Surpasses the requirements of ISO 12925-1:CKC, CKD, CKE.
<b>RENOLIN SynGear 220 HT</b>	Fully-synthetic high-temperature EP industrial gear oil based on selected polyglycol (PAG). Excellent wear protection and ageing stability; according to DIN 51517-3 (2009): CLP-PG and ISO 6743-6 CKC/CKD/CKT.
<b>RENOFLUID TF 1500</b>	Power transmission for lubrication of VOITH-turbo gears, hydraulic oil for VOITH-turbo clutches, also as low-viscosity high-pressure gear oil for gears particularly with control and joint oil circuit.

### Slideway Oils

<b>RENEP K-SERIES</b>	Solvent raffinates with special additives to reduce stick-slip. Good detergency. Compatible with water-miscible cutting fluids. CGLP slideway oils according to DIN 51502. Detergent/dispersant.
<b>RENEP CGLP-SERIES</b>	Solvent raffinates with lubricity improvers and friction-reducing additives. Good EP performance. Protect against corrosion and combat stick-slip. Advanced formulation. Proven good compatibility with many water-miscible cutting fluids. CGLP slideway oils according to DIN 51502. Demulsifying. These slideway oils are especially suitable for the use with ECOCOOL cutting fluids.
<b>RENEP KN-SERIES</b>	Solvent raffinates with surface-active and friction-reducing additives. Good EP performance and corrosion protection. Combat stick-slip. Excellent compatibility with cutting fluids. CGLP slideway oils according to DIN 51502. Demulsifying. Contain tackiness improvers. These slideway oils are especially suitable for the use with ECOCOOL cutting fluids.

# 1 INDUSTRIAL LUBRICANTS



## RENOLIN

### Paper Machine Oils

#### RENOLIN PA-SERIES

Paper machine oils, circulating and lubricating oils based on selected mineral oils for use in central lubricating systems in paper machines. Very good wear protection and corrosion protection. High ageing stability. Fulfills and surpasses the requirements for industrial gear oils CLP acc. to DIN 51517-3.

#### RENOLIN UNISYN CLP PA-SERIES

Fully-synthetic, lubricating and circulating oils of the latest generation based on high performance polyalphaolefins which are successfully in use in big central lubricating systems in papermachines. Synergistically acting additives guarantee high corrosion protection and excellent wear protection of gear sets and bearings. RENOLIN UNISYN CLP PA-SERIES has a high oxidation stability, avoids the formation of sludge and has a high stability at high temperatures. The products can also be used as gear oils CLP HC according to DIN 51517, part 3.

### Machine Oils

#### RENOLIN AR-SERIES

General lubricating oils for applications with no defined lubricant recommendations. Suitable for temperatures up to +70 °C. Exceed the requirements of L-AN lubricating oils according to DIN 51501.

### Cylinder Oils

#### RENOLIN CH-SERIES

High-quality, mineral oil-based cylinder oils. Good thermal stability and low coking. Exceed the requirements of Z lubricating oils according to DIN 51510.

### Turbine Oils

#### RENOLIN ETERNA-SERIES

Turbine oils of the latest generation for lubrication of gas, steam and turbo-compressors (also with gear boxes, FZG ≥ 10). Based on high-quality, hydrocracked base oils. High ageing resistance, excellent protection against sludging. Turbine oils according to DIN 51515 part 1 and part 2 (L-TDP and L-TGP). Approved by SIEMENS and MAN.

#### RENOLIN ETERNA SGV-SERIES

Turbine oils of the latest generation for lubricants of gas and steam turbine as well as for turbo compressor without gear boxes. Exceeds the requirements of DIN 51515-1 (L-TD), DIN 51515-2 (L-TG) and MAN TURBO AG, Germany gear boxes. Approved by SIEMENS and MAN.

### Transformer Oils

#### RENOLIN ELTEC

Premium-quality, mineral oil-based insulating oil which can be used in transformers, converters and switching gear.

#### RENOLIN E 10

High quality, inhibited insulating oil based on naphthenic base oils which can be used in transformers, switches, chocking coils, condensers and converters. Excellent dielectric properties and high oxidation stability. Fulfills the requirements for insulating oils class I according to RWE Power Specification.

#### RENOLIN E 3

Inhibited switchgear oil based on naphthenic base oils. Especially for the use in outdoor units.

### Tacky Oils

#### RENOTAC-SERIES

High-quality raffinates with lubricity improvers and anti-wear agents. Good EP performance and adhesion (tackiness). Lubricants for all total-loss applications (plain bearings, slideways, guides etc.).

# 1 INDUSTRIAL LUBRICANTS



## RENOLIN, PLANTO

### Heat Transfer Oils

#### RENOLIN THERM-SERIES

Special mineral and synthetic hydrocarbon-based oils with excellent thermal stability and high boiling points. Good thermal conductivity. Suitable for inlet temperatures ranging from -20 °C to over +350 °C. RENOLIN THERM 250, RENOLIN THERM 320, RENOLIN THERM 330 S, RENOLIN THERM 380 S.

### Environmentally Friendly Hydraulic and Lubricating Oils

#### PLANTOHYD 40 N



Environmentally compatible hydraulic and lubricating oils based on natural raw materials with additives to improve oxidation stability and ageing stability. Type HETG acc. to ISO 15380, for mobile and stationary hydraulic equipment. Rapidly biodegradable acc. to OECD 301 B >60%, awarded with the European Eco Label. Change-over recommendations acc. to ISO 15380 should be observed.

#### PLANTOHYD S-SERIES



Environmentally compatible lubricating and hydraulic oils based on partly saturated synthetic esters. They can be used universally in the temperature range from - 30 °C to + 90 °C. Rapidly biodegradable acc. to OECD 301 B >60%. Pass and surpass the requirements according ISO 15380 HEES. Change-over recommendations acc. to ISO 15380 should be observed. Awarded with the European Eco Label. ISO VG 15-46 are classified as non water pollutant.

#### PLANTOLUBE POLAR S-SERIES

Hydraulic oils based on saturated synthetic esters. Environmentally friendly because rapidly biodegradable. Extremely low pour point. Universally applicable at temperatures ranging from -55 °C to +90 °C. Exceed ISO 15380 HEES. ISO 15380 change-over recommendations should be observed.

#### PLANTOSYN 3268



Environmentally friendly HVI multigrade hydraulic oil with high temperature stability based on fully-saturated, synthetic esters (HEES). Rapidly biodegradable according to OECD 301 B >60%. Awarded the European environmental seal.

#### PLANTOSYN HVI-SERIES



Hydraulic oil based on fully-saturated synthetic esters. Environmentally friendly because rapidly biodegradable. Suitable for all hydraulic systems. Outstanding EP performance. Tested and approved by BOSCH REXROTH (BRUENINGHAUS) in axial-piston pumps and SAUER-SUNDSTRAND. Surpasses ISO 15380 HEES 46. ISO 15380 change-over recommendations should be observed. Awarded the European environmental seal.

### Environmentally Friendly Gear and General Lubricating Oils

#### PLANTOGEAR S-SERIES



Rapidly biodegradable and environmentally friendly, high performance gear oils based on saturated synthetic esters. Comply with DIN 51517-3. Exceed ISO 15380 HEES. Changeover recommendations according to ISO 15380 should be observed. Excellent protection against micropitting. Approved by well-known gear manufacturers. Awarded the European environmental seal. (ISO VG 220-680)

#### PLANTOGEAR HVI-Series



Rapidly biodegradable and environmentally friendly, high performance gear oils based on saturated synthetic esters. Comply with DIN 51517-3. Exceed ISO 15380 HEES. Changeover recommendations according to ISO 15380 should be observed. Excellent protection against micropitting. Awarded the European environmental seal. (ISO VG 100-150)

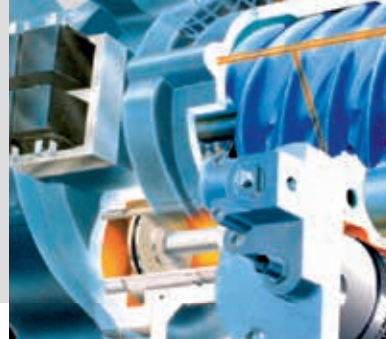
### Environmentally Friendly Slideway Oil

#### PLANTOLUBE CGLP 68/220 S

Rapidly biodegradable and environmentally friendly slideway oils based on synthetic esters. Good EP and anti-wear performance. Very good friction coefficients. These slideway oils are perfectly matched to PLANTOCUT and PLANTOHYD machine tool lubricants.



# 1 INDUSTRIAL LUBRICANTS



## RENOLIN, PLANTO

### Environmentally Friendly Tacky Oils

#### PLANTOTAC HV-SERIES

Premium-quality, vegetable oil-based tacky lubricants. Environmentally friendly because rapidly biodegradable. Good viscosity-temperature behaviour, tackiness, wear protection and film stability. Suitable for use as total-loss lubricants on timber sawing grids, joints and guide pins.

#### PLANTO TAC 68



Biodegradable Super High Performance Chain Saw Oil based on rapeseed. For professional use in chain saws. Excellent lubricity and good ageing stability. Awarded the European Eco Label.

### Environmentally Friendly Mould-release Oils

#### PLANTO SCHALUNGSÖL N



Universal, vegetable oil-based mould-release oil. Rapidly biodegradable acc. to OECD 301 B > 60%. Awarded with the European Eco Label.

#### PLANTO SCHALUNGSÖL S

Universal, ester-based mould-release oil. Rapidly biodegradable acc. to OECD 301 B > 60%.

### Environmentally Friendly Compressor Oil

#### PLANTOLUBE SC 46 S

Rapidly biodegradable, high performance oil for screw compressors. Based on saturated synthetic esters. PLANTOLUBE SC 46 S offers excellent ageing stability, good air release properties and low evaporation losses.

### Compressor and General Lubricating Oils

#### RENOLIN 200-SERIES

Ageing-resistant lubricating oils with good viscosity-temperature behaviour for normally stressed gearboxes, drive units as well as plain and rolling bearings. C lubricating oils according to DIN 51517-1 and VB lubricating oils according to DIN 51506.

#### RENOLIN 500-SERIES

Particularly ageing-resistant lubricating oils offering minimal coking. Contain additives to improve corrosion protection and ageing stability. VDL lubricating oils according to DIN 51506. For compressor outlet temperatures up to +220 °C.

#### RENOLIN DD-SERIES VDL

Lubricating oils for air compressors with lube-injected chambers. Contain additives to increase corrosion protection and ageing-resistance and reduce deposits (detergent-effect). VDL lubricating oils according to DIN 51506.

#### RENOLIN SC-SERIES SC MC-SERIES

Cooling oils for screw compressors with additives to increase corrosion protection and ageing stability and to reduce deposits. RENOLIN SC MC oils for thermally-stressed compressors. High viscosity index. Low foaming. Allow service intervals to be extended.

#### RENOLIN COOL +

State-of-the-art high performance screw compressor oil for difficult applications. Outstanding ageing stability and extremely long life.

#### RENOLIN UNISYN OL-SERIES

Fully-synthetic cooling oils for piston and screw compressors based on polyalphaolefins with excellent oxidation stability, good wear protection, outstanding demulsification and excellent viscosity-temperature behaviour. High viscosity index. Excellent air release. Allow service intervals to be extended. VDL according to DIN 51506 and synthetic hydraulic oils according to DIN 51524-3.

#### RENOLIN SE-SERIES

Fully-synthetic air compressor oils based on advanced synthetic ester technology.

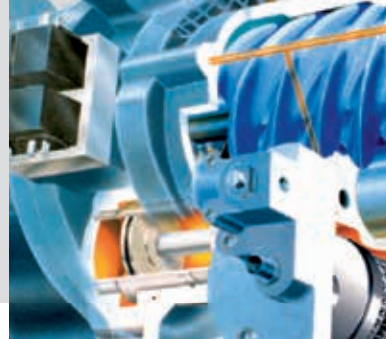
#### RENOLIN VAC 100 F

Vacuum pump lubricant based on highly refined mineral oils. Does not contain any additives.

#### RENOLIN SynAir 46

High performance synthetic air compressor fluid, excellent biodegradability according to OECD 301C > 60%. Excellent thermal and oxidation stability.

# 1 INDUSTRIAL LUBRICANTS



## RENISO

### Refrigeration Oils

<b>RENISO K-SERIES</b>	Highly-refined, naphthenic refrigeration oils for use with R22 and NH <sub>3</sub> refrigerants (RENISO KM 32 - KS 46 - KC 68 - KES 100).
<b>RENISO TES 100</b>	Highly-refined, paraffinic refrigeration oil with excellent viscosity-temperature behaviour for turbocompressors.
<b>RENISO WF-SERIES</b>	Special, highly-refined, mineral oil-based refrigeration oils for the lubrication of hermetically sealed refrigeration compressors which use Isobutane (R600a) refrigerants.
<b>RENISO S/SP-SERIES</b>	Fully-synthetic refrigeration oils based on chemically and thermally stable alkylbenzenes (ISO VG 32-220). For use with R22, S 68 refrigerants; RENISO S - also suitable für NH <sub>3</sub> .
<b>RENISO TRITON SE/SEZ-SERIES</b>	Fully-synthetic, ester-based refrigeration oils for fluorinated HFC and HFO refrigerants such as R134a, R404A, R507, R407C, R410A, R1234yf, R1234ze, etc., highly-dried.
<b>RENISO SYNTH 68</b>	Fully-synthetic, PAO-based refrigeration oil for all NH <sub>3</sub> and CO <sub>2</sub> applications (not miscible with CO <sub>2</sub> ).
<b>RENISO UltraCool 68</b>	Fully-synthetic refrigeration oil for NH <sub>3</sub> applications. For low oil carry-over and high thermal stability.
<b>RENISO PG 68/GL 68</b>	Fully-synthetic, polyalkylenglycol (PAG)-based, ammonia-(semi)-soluble refrigeration oils for NH <sub>3</sub> and hydrocarbon refrigerants.
<b>RENISO PAG 46/100</b>	Fully-synthetic, polyalkylenglycol (PAG)-based refrigeration oils for automotive air conditioning systems using R134a refrigerants (ISO VG 46; ISO VG 100).
<b>RENISO PAG 1234</b>	Fully-synthetic refrigeration oil based on double-encapped polyalkylene glycols (PAG). Newly developed for passenger cars air-conditioning (A/C) systems with HFO-1234yf as refrigerant (ISO VG46). Also suitable for R134a.
<b>RENISO C-SERIES</b>	Special, synthetic polyolester (POE)-based refrigeration oils for use with natural CO <sub>2</sub> refrigerants. For transcritical and subcritical CO <sub>2</sub> applications. Perfectly miscible with CO <sub>2</sub> .
<b>RENISO ACC 46 ACC 68</b>	Fully-synthetic refrigeration oils based on double-encapped PAG. Contain an effective additive system for outstanding Anti-Wear (AW) performance and highest thermal stability. Developed for transcritical CO <sub>2</sub> applications like air-conditioning or heat pump systems.

### Lubricants for the Food and the Pharma Industry

<b>CASSIDA</b>	Special lubricants for the food/pharma industry. For casual, technical not avoidable contact with food. NSF-H1 approved.
----------------	--

### Gasometer sealing oil

<b>RENOLIN GAS 68</b>	Universally usable, special gasometer sealing oil with very good low temperature behaviour, very low pourpoint and anti-stick-slip properties.
-----------------------	--



## RENOLIT

### Mineral Oil-based Greases for Plain and Roller Bearings

<b>RENOLIT CA-LZ</b>	High performance, long-life tacky grease based on a special calcium soap. Excellent corrosion protection as well as resistance to water and saltwater. -30 °C to +120 °C. Also available in spray can as <b>RENOLIT UNIMAX LZ</b> .
<b>RENOLIT CX-EP-SERIES</b>	Calcium complex soap-based greases for highly-stressed bearings as well as central lubrication systems. Recommended for applications in the chemical, rubber and steel industries as well as for mining and quarrying. NLGI grade 0, 1 and 2, -30 °C to +140 °C.
<b>RENOLIT CXI 2</b>	Calcium sulphonat complex grease with particularly good working stability and corrosion protection, even in the presence of salt water. Excellent EP performance. -20 °C to +160 °C.
<b>RENOLIT CSX 15</b>	Calcium sulphonat complex heavy duty grease with excellent corrosion protection and good properties, NLGI 1-2, -20 °C up to +180 °C.
<b>RENOLIT GP-SERIES</b>	Standard, multipurpose greases based on lithium soaps for the general lubricating of machines, NLGI grade 1, 2 and 3, -30 °C to +160 °C.
<b>RENOLIT MP</b>	Standard, multipurpose EP grease. Suitable for low temperatures. -40 °C to +120 °C. Approved in line with MB 267.0.
<b>RENOLIT LZR 2 H</b>	Highly-adhesive, premium-quality, long-life EP grease based on lithium soap for all plain and rolling bearings as well as central lubrication systems in commercial vehicles and general machinery. Excellent corrosion protection even in the presence of saltwater, -30 °C to +140 °C. Approved for central lubrication systems of SKF Lubrication Solutions, BEKA-MAX and LINCOLN.
<b>RENOLIT H 443-HD 88</b>	Lithium soap-based EP grease with tackiness improvers. Resistant to weak acids and alkalines as well as cutting fluid emulsions. Recommended for applications subject to vibration. Also for damp atmospheres. -30 °C to +140 °C.
<b>RENOLIT FEP-SERIES</b>	Lithium soap greases with EP additives for mechanically demanding applications, NLGI 1, 2 and 2-3, -20 °C to +140 °C.
<b>RENOLIT FAP 502</b>	Lithium-/calcium soap-based EP grease with high base oil viscosity for highly loaded plain and roller bearings with low speeds.
<b>RENOLIT FLM 2</b>	EP-grease based on lithium soap and mineral oil, containing molybdenum disulphide (MoS <sub>2</sub> ) NLGI 2, -30 °C to +140 °C.
<b>RENOLIT DURAPLEX EP-SERIES</b>	EP-allround greases based on lithium complex soaps. Good corrosion protection. For high thermal and mechanical loads. NLGI grade 00-000, 1, 2 and 3, -30 °C to +160 °C.
<b>RENOLIT LX-PEP-SERIES</b>	Special greases based on lithium complex soap for long-life applications. Good corrosion protection, thermally and mechanically stable, specially suitable for wheel bearings and hub units in cars and trucks, NLGI 1-2, 2 and 3, -30 °C to +150 °C. Approved according to MAN 248 Li-H 2, MB 265.1, SCHAEFFLER, DB-Kenndatenblatt 873 499, ZF TE-ML 12, VW TL 52147X, Interprecise.
<b>RENOLIT PU-FH 300</b>	High temperature grease containing a polyurea-based thickener for low-speed bearings. -20 °C to +180 °C.

### Greases based on Synthetic Fluids for Plain and Roller Bearings

<b>RENOLIT HLT 2</b>	Ageing-resistant, thermally and mechanically stable, lithium soap greases based on polyalphaolefines. Good elastomer compatibility. NLGI 2, -40 °C to +140 °C.
<b>RENOLIT S 2</b>	Special, ester-based grease for high-speed roller bearings and/or low temperatures. -60 °C to +120 °C.
<b>RENOLIT JP 1619</b>	Mechanically-stable, low-temperature grease. Also suitable for high-speed bearings. NLGI grade 1 -50 °C to +120 °C.

## 2\_GREASES



### RENOLIT

#### Greases based on Synthetic Fluids for Plain and Roller Bearings

<b>RENOLIT GL 1</b>	Low-friction and low-wear special grease with noise-suppressing properties. For all types of plain and roller bearings as well as gearboxes, guide rails, sliding roofs, door brakes, screws, etc., -30 °C to +140 °C. Approvals BMW and OPEL. Also available in spray cans as <b>RENAX GLEITSPRAY</b> .
<b>RENOLIT HI-SPEED 2</b>	Special grease for roller bearings of high speed machine tool and textilmachine spindles, $n \times d_m$ up to 1,4 million mm/min, NLGI 2, -40 °C up to +120 °C.
<b>RENOLIT CX-TOM 15</b>	Special calcium complex soap grease with outstanding low temperature characteristics. -40 °C to +160 °C.
<b>RENOLIT PU-MA 2</b>	Fully synthetic high temperature grease based on a polyurea thickener for the lubrication of plain and roller bearings, e.g. electric motores, hot air blowers, dryers in the paper industry or calander, -40 °C up to +180 °C.
<b>RENOLIT UNITEMP 2</b>	Fully-synthetic, high-temperature grease. Particularly resistant to ageing, water resistant and work stable. Suitable for a wide range of temperatures between -50 °C and +180 °C.

#### Mineral Oil-based Semi-fluid Greases

<b>RENOLIT SO-GF-SERIES</b>	Stringy, sodium soap-based gear greases with good wear protection. -30 °C to +100 °C. Available in the NLGI grades 0 and 00.
<b>RENOLIT LZR 000</b>	Semi-fluid grease for engine vehicle central lubrication systems. Gear grease for gearboxes in municipal machinery. Observe manufacturer's recommendations, -40 °C to +110 °C. Approved according to MAN 283 Li-P 00/000 and MB 264.0, suitable for central lubrication systems: SKF Lubricaton Solutions, DEUTSCHE TECALEMIT and LINCOLN.
<b>RENOLIT SF 7-041</b>	Semi-fluid grease for central lubrication systems in machine tools and other machinery. -30 °C to +120 °C.
<b>RENOLIT DURAPLEX EP 00</b>	Semi-fluid grease based on lithium complex soaps. -30 °C to +140 °C.

#### Silicone Greases

<b>RENOLIT SI 300-SERIES</b>	Low temperature silicone greases. Approved by the German Materials Testing Institute for the lubrication of bridge supports and sliding films in the construction industry. -70 °C to +160 °C and even +200 °C for short periods.
<b>RENOLIT SI 400-SERIES</b>	Standard silicone greases for household goods and ventilators operating at average ambient temperatures. -30 °C to +180 °C.
<b>RENOLIT SI 511-SERIES</b>	High-temperature silicone greases for furnace wagons in the mining and quarrying industries, hot air blowers and drying lines. -30 °C to +220 °C and even +280 °C for short periods.
<b>RENOLIT SI 708</b>	Electrically-insulating gel grease. Also suitable as a lubricating and assembly grease. -40 °C up to 200 °C.



## PLANTO, RENOLIT

### Rapidly Biodegradable Greases for Plain and Roller Bearings

<b>PLANTOGEL 2 FS</b>	Rapidly biodegradable EP grease with graphite additives, -30 °C to +120 °C.
<b>PLANTOGEL 000 S</b>	Rapidly biodegradable semi-fluid EP grease for central lubrication systems of motor vehicles, industrial machinery and machine tools. Gear grease for gearboxes in municipal machinery. Observe manufacturer's recommendations, -40 °C to +120 °C. For central lubrication systems of GROENEFELD, MAN 283 Li-P 00/000, MB, WILLY VOGEL.
<b>PLANTOGEL ECO 2N</b>	Environmentally compatible, rapidly biodegradable total loss lubricating grease based on calcium soap and rape seed oil. Awarded with the EU-Ecolabel, temperature range -20 °C up to +70 °C.
<b>PLANTOGEL ECO 2 S</b>	Environmentally compatible, rapidly biodegradable EP-grease based on lithium soap and synthetic esters for the lubrication of plain and roller bearings. Good pumpability in central lubrication systems, awarded with the EU-Ecolabel, temperature range -40 °C up to +120 °C.

### Special Greases

<b>RENOLIT CX-HT-SERIES</b>	Calcium sulphonated complex soap-based greases containing MoS <sub>2</sub> and graphite for the lubrication of highly-stressed friction points at high temperatures. Excellent protection against corrosion and wear. Recommended for the greasing of gear wheels, NLGI 0 and 2, -20 °C to +200 °C. In NLGI grade 2 also available in spray cans as <b>RENOLIT UNILOAD</b> .
<b>RENOLIT CX-TC 1</b>	Special calcium complex soap-based grease containing a large proportion of graphite for use as a thread compound in the offshore and mining industries, -20 °C to +200 °C.
<b>RENOLIT CHUCK PASTE</b>	White special paste to avoid fretting corrosion of threads and chucks, NLGI 2-3.
<b>RENOLIT PASTE PW</b>	Special paste on calcium sulphonate soap and mineral oil as assembly paste to avoid fretting corrosion.
<b>RENOLIT ST 8-081/2</b>	High-temperature grease for plain and roller bearings in the industrial sector. Approved by STEINMÜLLER for smoke flue gas flaps in power stations. -20 °C to +260 °C, +280 °C for short periods.
<b>RENOLIT ST-FTM-SERIES</b>	Synthetic high temperature grease based on an organic thickener. Used for the lubrication of ejectors of plastic injection moulding machines and for tire heating press segment lubrication, NLGI 1 and 2, temperature range -20 °C to +250 °C.
<b>DUOTAC ZAHNRADSPRAY</b>	Special, bitumen-free, graphite lubricant for all exposed gears, chains and chainwheels. -20 °C to +120 °C.
<b>RENOLIT AS</b>	Hydrocarbon-resistant, tacky, sealing grease. Is not washed out by mineral oils, gasoline and some chlorinated hydrocarbons. -20 °C to +140 °C.
<b>RENOLIT FOL 2</b>	Special grease containing PTFE for the lubrication of very low-speed bearing surfaces such as sliding films in the construction industry. Approved by the German Materials Testing Institute. -40 °C to +140 °C.
<b>RENOLIT TFL 2</b>	Special grease with PTFE especially for slidepairs with and without plastic components. -40 °C to +140 °C.
<b>RENOLIT EP X1</b>	Heavy duty gear coupling grease, NLGI 1, -15 °C to +120 °C.

## 3\_CUTTING FLUIDS



### ECOCOOL

#### Biocide free, Water-miscible, Universal Cutting Fluids

<b>ECOCOOL MODULAR SYSTEM</b>	Soluble metal working fluid based on a modular system for all-purpose machining of cast iron, steel and aluminium materials. Economical advantages because of low application concentrations. BIOCIDES FREE, boron containing/boron free.
<b>ECOCOOL R-2510 N</b>	Universal metal working fluid for the machining and grinding of steel and cast alloys. BIOCIDES FREE, boron containing.
<b>ECOCOOL R-2030 MB</b>	Cutting fluid for the machining of steel, cast iron and aluminium. Can be used for roughing and grinding, MAPAL approved. BIOCIDES FREE, boron containing.
<b>ECOCOOL R-3015 GS-W</b>	Specially formulated for soft water. Suitable for aluminium, cast chrome-nickel alloys and stainless steels. BIOCIDES FREE, boron containing.

#### Boron free, Biocide free, Universal Cutting Fluids

<b>ECOCOOL GRINDSTAR BF</b>	Multifunctional soluble cutting fluid for cast iron and steel machining. BIOCIDES FREE, boron free.
<b>ECOCOOL AFC 1515 BF</b>	Multifunctional soluble cutting fluid for steel- and aluminium machining. BIOCIDES FREE, boron free.

#### Water-miscible Cutting Fluids Specially for Aluminium and High-alloy Steels

<b>ECOCOOL R-TN 2525-HP</b>	Cutting fluid with EP additives, universally applicable from aluminium to stainless steel. MAPAL approved. Boron containing.
<b>ECOCOOL R-AFC 1515 L</b>	Metal working fluid universally applicable for steel and aluminium materials. MAPAL approved. BIOCIDES FREE, boron containing.
<b>ECOCOOL AL-Plus B</b>	Mineral oil-based cutting fluid for the roughing of aluminium, steel and nonferrous metals. Also for the special aluminium alloys. BIOCIDES FREE, boron free.

#### Biocide free, Water-miscible Cutting Fluid Specially for Cast Iron

<b>ECOCOOL R-GRINDSTAR</b>	Cutting fluid with a large buffer capacity. Specially formulated for grey cast iron and all common steels. Optimized cleaning and flushing performance. Economical consumption. BIOCIDES FREE, boron containing.
<b>ECOCOOL R-FERROSTAR-SERIES</b>	Universal cutting fluid for the machining of steel and cast iron. The product's unique cleaning and flushing performance keeps machines clean, MAPAL approved. BIOCIDES FREE, boron containing/boron free.

#### Water-miscible, pH-neutral Cutting Fluid

<b>ECOCOOL ALUSTAR BF</b>	Multifunctional cutting fluid for the machining of steel, aluminium and other nonferrous metals. PH-neutral. Low alkaline content and thus skin compatible. Also suitable for special aluminium alloys. MAPAL approved. Boron free.
---------------------------	---

Further ECOCOOL cutting fluids also boron- and formaldehyde-free with special requirements on request.

# 3\_CUTTING FLUIDS



## ECOCOOL

### Water-miscible Cutting Fluid Specially for Magnesium

<b>ECOCOOL 2516 MG</b>	High-quality cutting fluid. Also suitable for aluminium and steel. Boron free.
----------------------------	--

### Water-miscible Cutting Fluid Specially for Copper and Brass

<b>ECOCOOL COPPERSTAR</b>	Boron- and amine-free universal metal working fluid with additives suitable for all nonferrous metals, Formaldehyde Depot free.
<b>ECOCOOL 2520</b>	High-alloyed, universal cutting fluid for the machining of aluminium alloys, steel and nonferrous metals. Formaldehyde Depot free, boron free.

### Biocide free, Water-miscible, Full-Synthetic Cutting Fluids

<b>ECOCOOL S-FC</b>	Fully-synthetic cutting fluid for the machining and grinding of steel and cast iron. BIOCID FREE, boron free.
<b>ECOCOOL S-ALU</b>	Fully-synthetic cutting fluid for highest requirements. BIOCID FREE, boron free.

### Biocide free, Water-miscible Cutting Fluid Specially for Grinding Carbides

<b>ECOCOOL S-CO 5</b>	Fully-synthetic cutting fluid formulated for the grinding of carbides. Combats the complexing of cobalt. BIOCID FREE, boron containing.
---------------------------	---

### Biocide free, Water-miscible Cutting Fluid Specially for Drinking Water Pipes

<b>ECOCOOL GS 2000</b>	Fully-synthetic thread cutting agent for drinking water pipes. Approved by the DVGW (German Institute for Gas and Water).
----------------------------	---

### Emulsion Maintenance and Service Products

<b>ECOCOOL AKTIV-SERIES</b>	Correction concentrates for water-miscible cutting fluids. Refreshes, for example, emulsifiers, corrosion inhibitors and EP agents.
<b>ANTISEPT-SERIES</b>	Bactericides and fungicides for the maintenance of water-miscible cutting fluids. Ideal for ECOCOOL and ECOCOOL S products.
<b>ANTIFOAM-SERIES</b>	Defoaming agents, perfectly matched to the water-miscible ECOCOOL and ECOCOOL S series of cutting fluids.
<b>RENOCLEAN SMC +</b>	System cleaner, perfectly matched to the water-miscible ECOCOOL and ECOCOOL S series of cutting fluids.

## 3\_CUTTING FLUIDS



### ECOCUT

#### Neat, Chlorine-free Cutting Oils

<b>ECOCUT 3000-SERIES</b>	Steel machining oils containing a large percentage of additives. These products can also be used for the machining of nonferrous metals.
<b>ECOCUT HSG</b>	Special grinding oils for flute, deep, gear and tool grinding operations.
<b>ECOCUT HFN-UNI</b>	Special grinding oils for gear, flute and deep grinding operations. Also for machining operations with defined cutting edges.
<b>ECOCUT HS</b>	Fully-synthetic, PAO-based grinding oils for tools, HSS and carbides.
<b>ECOCUT HON/HFN</b>	Honing and finishing oils for steel, cast iron and aluminium alloys. Also suitable for bore hole honing.
<b>ECOCUT FE/1520</b>	Spark erosion oils. Universally suitable for roughing and precision passes. Neutral odour and free of aromatics.
<b>ECOCUT 500-SERIES</b>	Thread-cutting oils with high EP performance.
<b>ECOCUT 600-SERIES</b>	Deep hole drilling oils, universally applicable for all deep hole drilling processes using gun, ejector or BTA drills.
<b>ECOCUT 700-SERIES</b>	Deep hole drilling oils for chrome-nickel steels. Recommended for all operations on difficult-to-machine chrome-nickel steels.
<b>ECOCUT 800/8000-SERIES</b>	Broaching oils. Special oils for stainless steels, specially for the vertical and horizontal broaching of gear teeth and V-grooves.

#### Environmentally Friendly, Neat Cutting Oils

<b>UNIFLUID 10 UNIFLUID 32</b>	Rapidly biodegradable, ester-based cutting oils. Multifunctional application in machine tools at cutting and hydraulic oils. Suitable for all materials.
<b>PLANTOCUT SR-SERIES</b>	Rapidly biodegradable, ester-based cutting oils. Can be used for all materials.

#### Neat Minimum Quantity Lubrication Products

<b>PLANTO MIKRO-SERIES</b>	For use in minimum quantity lubrication (MQL) systems. Good EP performance. For all materials.
<b>ECOCUT MIKRO-PLUS-SERIES</b>	For use in minimum quantity lubrication (MQL) systems. Good EP performance. For all materials.

#### Multifunctional Oils

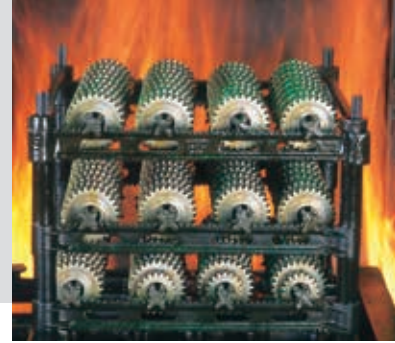
<b>ECOCUT HFN/LE-SERIES</b>	Universal cutting oils for nonferrous metals, cast iron and steel. Low-misting and low-evaporation. Can also be used as HLP hydraulic oils.
-----------------------------	---

#### Multifunctional Oils Specially for the Machining of Magnesium

<b>ECOCUT HFN 16 LE</b>	Special cutting oil for the machining of magnesium and its alloys.
-------------------------	--



## 4\_ QUENCHING FLUIDS



### **THERMISOL**

#### Quenching Fluids / Quenchant Concentrates

**THERMISOL  
QB-SERIES**

Bright quenching oils.

**THERMISOL  
QH-SERIES**

High Performance quenchants and high performance hardening oils.

**THERMISOL  
QW-SERIES**

Hot oil quenchants and annealing oils.

**THERMISOL  
QHY-SERIES**

Synthetic, high performance quenching and hardening oils.

**THERMISOL  
QZS-SERIES**

Water-miscible quenching fluids.

## 5\_CLEANER



### RENOCLEAN

#### Immersion cleaner (aqueous, alkaline)

<b>RENOCLEAN SPEZIAL 2000</b>	Medium alkalinity for universal use (immersion and ultrasonic for workpieces, manually for floors, etc.). Usable at temperatures from +20 to +70 ° C.
<b>RENOCLEAN VR 1798/2</b>	Medium alkalinity for immersion cleaning with and without ultrasonic. Also suitable for floor cleaning. Temperature range from +20 to +60 ° C.
<b>RENOCLEAN FDC 4001</b>	Highly alkaline, for immersion in the medical field, with and without ultrasonic. Temperature range from +20 to +60 ° C.
<b>RENOCLEAN MDT 3002</b>	Emulsifying surfactant for alkaline, neutral and acidic industrial cleaners. Use as emulsifying salt-free immersion and ultrasonic cleaner.

#### Spray and immersible cleaner (aqueous, alkaline)

<b>RENOCLEAN MTO 3001</b>	Multi-metal-usable salt-free spray and immersion cleaner, Medium alkalinity, low foaming from above 45°C, ultrasonic suitable. Temperature range from +30 to +80 ° C, up to 25 bar.
<b>RENOCLEAN MTA 3003</b>	Multi-metal-usable spray and immersion cleaner, Medium alkalinity, low foaming, ultrasonic suitable. Temperature range from +40 to +80 ° C, up to 15 bar.
<b>RENOCLEAN MSA 3001</b>	Multi-metal-usable spray and immersion cleaner, Medium alkalinity, ultrasonic suitable. Temperature range from +40 to +80 ° C, up to 5 bar.
<b>RENOCLEAN MDA 4002</b>	Highly alkaline, silicate free, for ferrous metals and Hot-dip galvanised steel. Temperature range from +20 to +80 ° C; sprayable up to 4 bar.
<b>RENOCLEAN FSA 4017</b>	Spray and immersion cleaner for ferrous metals, highly alkaline, suitable for ultrasonic. Temperature range from +40 to +80 ° C, up to 25 bar.

#### Spray cleaner (aqueous, alkaline)

<b>RENOCLEAN VR 1021</b>	Medium alkaline, salt-free neutral-cleaner. Applicable at temperatures from +40 to +80 ° C and up to max. 20 bar.
<b>RENOCLEAN VR 1021 DGI</b>	Medium alkalinity strongly demulsifying, for high pressure application. Temperature range from +10 to +80 ° C, up to 600 bar.
<b>RENOCLEAN VR 1021 CXV</b>	Medium alkalinity, also for pressure flooding and high pressure deburring. Operating temperature +30 to +80 ° C, up to 300 bar.
<b>RENOCLEAN MSO 3004</b>	Medium alkalinity, salt free, mikrofilterable for high pressure deburring. Temperature range from +30 to +80 ° C, up to 500 bar.
<b>RENOCLEAN WSA 4002</b>	Spray cleaner for heavily soiled ferrous metals, highly alkaline, contains silicate. Temperature range from +30 to +70 ° C, up to 15 bar.

#### Modular cleaner (builder and surfactant)

<b>RENOCLEAN MTA 2001, MTA 3001, MTA 4001</b>	Neutral to moderately alkaline builders, phosphate-containing, mikrofilterable. Surfactant, silicate and borate-free, for immersion, ultrasonic and spray cleaning systems, for almost all surfaces. Temperature range from +40 to +80 ° C.
<b>RENOCLEAN FTA 4001</b>	Highly alkaline, phosphate-free builder, mikrofilterable. Surfactant, silicate and borate-free, for immersion, ultrasonic and spray cleaning systems. Can be used for dephosphating and as a pretreatment in electroplating. Temperature range from +20 to +85 ° C.



## RENOCLEAN

### Modular cleaner (builder and surfactant)

<b>RENOCLEAN FTA 4002</b>	Highly alkaline, phosphate-builder, mikrofilterable. Surfactant, silicate and borate-free, for immersion, ultrasonic and spray cleaning systems. Applicable as a pretreatment in electroplating. Temperature range from +40 to +80 ° C.
<b>RENOCLEAN ENTFETTER 39</b>	Highly alkaline, silicate and phosphate containing builder, surfactant and borate free, for immersion, ultrasonic and spray applications. Applicable as a pretreatment for electroplating. Operating temperature +20 to +80 ° C.
<b>RENOCLEAN TENSID 161</b>	Low demulsifying surfactant for neutral and alkaline cleaner for immersion applications, suitable as an additive for vibratory finishing.
<b>RENOCLEAN MST 2001</b>	Demulsifying surfactant for acidic, neutral and alkaline cleaner for immersion, ultrasonic and spray applications. Can also be used without Builder. Suitable as an additive for vibratory finishing.
<b>RENOCLEAN VR 1500</b>	Demulsifying surfactant for neutral and alkaline cleaner for spray applications. Can also be used without Builder.
<b>RENOCLEAN MDT 3002</b>	Emulsifying surfactant for alkaline, neutral and acidic industrial cleaners. Useful as an additive for vibratory finishing.

### Acidic cleaner

<b>RENOCLEAN FSO 2010</b>	Neutral cleaner and rust remover primarily for corroded steel and castings, usable after thermal or chemical deburring, for immersion, ultrasonic, pressure flooding and spray applications.
<b>RENOCLEAN FTM 1001</b>	Phosphoric acid cleaner to remove rust from workpieces and corroded equipment, as well as for cleaning encrusted, contaminated cleaning equipment.

### Hydrocarbon Cleaner

<b>RENOCLEAN KAF</b>	For universal application in industry and workshop, suitable for solvent cleaning systems. free of aromatics, short drying time.
<b>RENOCLEAN KU</b>	Isoparaffin-based , universally applicable solvent, especially for precision mechanics and electronics. Suitable for solvent cleaning systems.
<b>RENOCLEAN KLV</b>	VOC-free, slowly evaporating cleaner for universal use, for solvent systems suitable.
<b>RENOCLEAN E</b>	Emulsifying cold cleaner for general application, such as in the workshop.
<b>RENOCLEAN UWF</b>	Solvent for cleaning of machines, engines, chassis, tarpaulins and other parts from oils, fats, resins, waxes, tars and uncured coatings.
<b>RENOCLEAN MTS 7001</b>	Organic Cleaner (modified Alcohol) with a very high dissolving power for fats and oils, it triggers because of the good solvent properties, many part-polar residues that can not be solved with conventional hydrocarbon cleaners.

## 5\_CLEANER



### RENOCLEAN, ANTICORIT

#### System cleaner for waterbased operating fluids

<b>RENOCLEAN SMC / SMC+</b>	Highly effective system cleaner for the supply systems of water mixed working fluids and coolants in central systems or individually filled machines. SMC + is free from formaldehyde releasers.
<b>RENOCLEAN FXM 4005</b>	Modular, biocide and fungicide-free system cleaner for the supply systems of water mixed working fluids and coolants. Additivable as needed with biocides and fungicides of the service program of PM1.

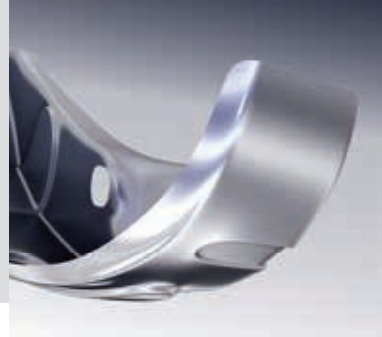
#### Corrosion protection (temporary)

<b>RENOCLEAN VR 3222</b>	Mildly alkaline, mineral oil-free, synthetic corrosion protection product for re-preservation of cleaned components made of steel, aluminum and non-ferrous metal. Usable as a builder in modular systems.
<b>RENOCLEAN VR 2729 K</b>	Mineral oil-free synthetic corrosion protection product for re-preservation of cleaned components made of steel and cast iron. Usable as a builder in modular systems.
<b>ANTICORIT SKR 3001</b>	Medium-alkaline, mineral oil-free synthetic corrosion protection product for re-preservation of cleaned components made of steel, aluminum and non-ferrous metal. Usable as a builder in modular systems.
<b>ANTICORIT MKR 30</b>	Mild alkaline, sprayable, mineral oil-based corrosion protection emulsion, free of boron compounds and monoethanolamine, suitable for the treatment of workpieces made of steel, aluminum and copper-based metals.

#### Other specialties

<b>RENOCLEAN GSO 3001</b>	Spray cleaner for cleaning of transport containers of any kind, but especially from plastics, to remove oil, dust, grease and dirt.
<b>RENOCLEAN GXA 3004</b>	All-purpose cleaner for maintenance of workshop equipment, workshop walls and workshop floors, manually and by machine.
<b>RENOCLEAN 431</b>	Lubricant for the assembly of rubber and elastomers free of solvents and mineral oil.
<b>RENOCLEAN AKTIV DA</b>	Highly effective demulsifier with additional defoaming effect is equally suitable for mineral oil based and synthetic emulsions and solutions.
<b>RENOCLEAN GXM 3001</b>	Silicone oil-free, fast-acting defoamer, designed for aqueous RENOCLEAN cleaner.
<b>RENOCLEAN HAND PROTECT, -HAND WASH AND -HAND CARE</b>	Perfectly matched skin-protection, skin-cleaning and skin-care products.

## 6 FORMING LUBRICANTS



### RENOFORM

#### Neat Forming Lubricants

<b>RENOFORM UBO-SERIES, LVO-SERIES</b>	Residue-free stamping oils. Mainly volatile at room temperatures. VOC-free formulations available.
<b>RENOFORM MCO-SERIES, MBO-SERIES</b>	Drawing compounds in particular for automotive industry.
<b>RENOFORM MBO 369/2, EMO-SERIES</b>	Cold extrusion oils.
<b>RENOFORM MBO 369 UNI, EYO-SERIES</b>	Multifunctional cold extrusion oils, for extrusion as well as slideway-oil.
<b>RENOFORM DMO-, FMO-, HBO-, ZSB-SERIES</b>	Neat oils for drawing, stamping and fine blanking.
<b>RENOFORM FSO-, MBO-SERIES</b>	Synthetic mineral oil-free drawing compounds.
<b>RENOFORM WO-SERIES</b>	Cold rolling oils for all applications.
<b>RENOFORM MBO 2907-, HMO-SERIES, MBO 2755 SD</b>	Lubricants for hydroforming.

#### Water-miscible Forming Lubricants

<b>RENOFORM TYM-, MCU-SERIES</b>	Emulsifiable compounds. In particular for copper wire drawing.
<b>RENOFORM MBW-SERIES</b>	Emulsifiable drawing compounds. Suitable for steel and non-ferrous metals.
<b>RENOFORM TRENOIL-, WN-SERIES</b>	Emulsifiable cold rolling oils. Suitable for steel and non-ferrous metals.
<b>RENOFORM DSW-SERIES</b>	Synthetic drawing compound. Suitable for steel and non-ferrous metals.

#### Pasty Forming Lubricants

<b>RENOFORM SB 2, MF 9</b>	Watermiscible drawing paste, pigment free.
<b>RENOFORM HAP 801/6, HBT 581/3</b>	Drawing paste, containing solid lubricants for difficult forming operations.

# 7\_CORROSION PROTECTION



## ANTICORIT

### Corrosion Protection Oils

<b>ANTICORIT RPO-SERIES</b>	Modern corrosion protection oils for universal use.
<b>ANTICORIT RP 30NT</b>	Conventional corrosion protection oil for steel strip surfaces.
<b>ANTICORIT RP 4107-SERIES</b>	Thixotropic, barium-free corrosion protection oils for all coiled surfaces. Outstanding protection even under extreme climatic conditions. Optimum washability even after ageing. Standard body panel protection oil used by the German steel industry.

### Prelubes / Hotmelts

<b>ANTICORIT PL 3802-SERIES</b>	Prelubes, which combine the excellent corrosion protection properties of the ANTICORIT RP 4107 series with outstanding forming performance on all cold rolled panels. Panels coated with prelubes prior to dispatch from steel mills can undergo difficult pressing operations without additional lubrication. VDA approved.
<b>ANTICORIT PLS 100T</b>	Thixotropic 2nd generation prelube with further improved deep drawing properties and excellent corrosion protection. Very good compatibility with down stream processes. Fulfils requirements of VDA 230-213.
<b>ANTICORIT PL 39 SX</b>	Hotmelt product which forms a solid film on metal surfaces. Coils or stacks coated with this product can be pressed without additional lubricants. Fully compatible with other ANTICORIT corrosion preventives and RENOFORM drawing compounds. Also suitable as a supplementary pressing lubricant.

### Dewatering-Fluids

<b>ANTICORIT DFO-SERIES DFW-SERIES</b>	Dewatering fluids for rapid water displacement. Forming thin, highly effective oily, waxy corrosion protection films. Also available in VOC-free formulation acc. 31. BImSchV @ 20°C.
<b>ANTICORIT DF SERIES</b>	Dewatering fluid without film forming components for stain-free drying and maintaining dewatering fluids in use.

### Water-miscible Corrosion Preventives

<b>ANTICORIT MBR</b>	Water-miscible corrosion preventive for the protection and dark staining of small components.
<b>ANTICORIT MKR-SERIES</b>	Water-miscible corrosion preventives for the cleaning and interim protection of semifinished components, phosphated parts and for parts which come into contact with drinking water. Also a hydraulic water and cooling additive.
<b>ANTICORIT S-/SKR-SERIES</b>	Water-soluble, mineral oil-free and low-foaming hydraulic water and coolant additives.



## ANTICORIT

### Vapor Phase Corrosion Protection (VCI)

<b>ANTICORIT VCI UNI S-SERIES</b>	VCI powder, packed into permeable paper bags which are simply placed inside the packaging. Suitable for many kinds of metal and metal-combinations.
<b>ANTICORIT VCI UNI T-SERIES</b>	VCI tablets, easy to use and perfect for intermediate storage. Suitable for many kinds of metal and metal-combinations.
<b>ANTICORIT VCI UNI O-SERIES</b>	Mineral oil with VCI properties. Suitable for many kinds of metal and metal-combinations. Perfect for the corrosion protection of engines, gear boxes, tanks and pumps.
<b>ANTICORIT VCI UNI IP-SERIES</b>	VCI fluids. Perfect combination of liquid VCI with odour-free solvent. Suitable for many kinds of metal and metal-combinations. Especially applicable for the corrosion protections of transport packaging.
<b>ANTICORIT VCI UNI W-SERIES</b>	VCI fluids for use with water-based products like cleaner or as an additive in cooling systems. Suitable for many kinds of metal and metal-combinations.

### Special Corrosion Preventives

<b>ANTICORIT 04 W / TX 10-A / TX 11 KL 7 / OHK-F / LSB</b>	The complete corrosion protection program for roller bearings. Offer long-term protection. Compatible with all common subsequently applied lubricants and greases.
<b>ANTICORIT TX 8R / DW THIX R2 / LBO-SERIES</b>	Optimum chain and rope protection. Excellent wear protection when components are used for the first time. Compatible with common subsequently applied lubricants. Also recommended for conveyor belt chains.
<b>ANTICORIT DFG</b>	Penetrating oil spray with good lubricating properties.
<b>ANTICORIT SPO-SERIES</b>	Skin-pass fluid with enhanced corrosion protection.
<b>ANTICORIT BGI-SERIES</b>	High Performance corrosion prevention oil containing VCI. Offers reliable long-term corrosion protection for bearings, gearboxes, etc.
<b>ANTICORIT BW, HKW-SERIES</b>	Corrosion protection fluids which form thick, waxy and dry films for outdoor and long-term protection. Can also be used for underfloor and cavity protection.

### Special Corrosion Preventives

<b>ANTICORIT BML 3</b>	Mineral oil-free corrosion preventive for brake components and systems. Compatible with brake fluids.
<b>ANTICORIT CPX® TECHNOLOGIE</b>	Full Solid wax conservation, free of solvent and water. Fulfils the VOC guideline acc. 31. BImSchV. Adjusted for cold application with standard spraying application. Used for cavity protection with long time corrosion protection and as closedown conservation for tools and dies.

# 7\_CORROSION PROTECTION



## ANTICORIT

### Corrosion Protection Concentrates

#### ANTICORIT RPC 5000

Corrosion protection concentrate for the protection of all metals. Excellent fingerprint remover properties. Suitable for the corrosion prevention in industrial washing machines. Soluble in white spirit and isoparaffins.

#### ANTICORIT 04-SERIES

Barium-free corrosion protection concentrates with outstanding corrosion protection properties for a lot of applications, especially for the bearing industry.

### Solvent and Solvent Based Products

#### ANTICORIT A-SERIES

Low-aromatic solvents and thinners for ANTICORIT products. Also available in VOC-free versions.

#### ANTICORIT 1449 IP

Isoparaffin solvent and thinner for ANTICORIT products.

#### ANTICORIT RPS-SERIES

Modern corrosion protection products based on solvents. Forming a thin and highly effective oil film.

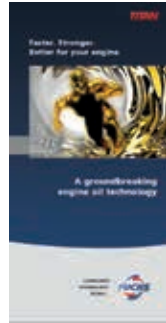


# PRODUCT BROCHURES AUTOMOTIVE

Request under: zentrale@fuchs-schmierstoffe.de



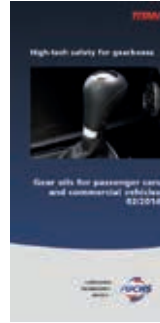
Image Flyer



Flyer  
TITAN XTL



Flyer  
Motor oils for  
passenger cars



Flyer  
Gear oils



Flyer  
Automatic transmission  
fluids



Flyer  
MAINTAIN



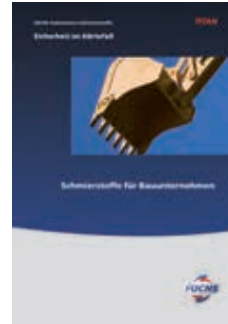
Brochure  
XTL for commercial vehicles



Brochure  
PLANTO



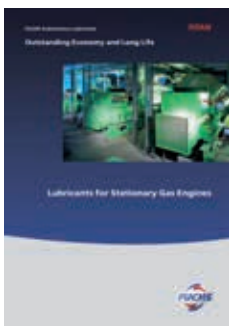
Brochure  
PRO GAS



Brochure  
Lubricants for  
Construction Companies



Brochure  
Lubricants for  
Transport Companies



Brochure  
Gas engine oils



Flyer  
Gas engine oils



Brochure  
AGRIFARM



Flyer  
AGRIFARM



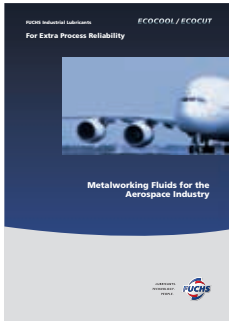
XTL-Video  
for passenger cars



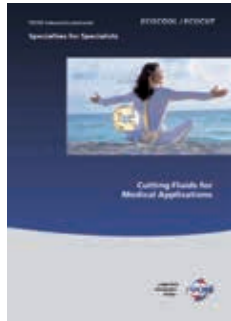
XTL-Video  
for commercial vehicles

# PRODUCT BROCHURES INDUSTRY

Request under: zentrale@fuchs-schmierstoffe.de



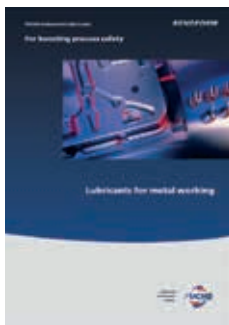
Brochure  
AEROSPACE  
lubricants



Brochure  
Cutting fluids for the MEDICAL  
SECTOR



Brochure  
Minimum quantity  
lubrication MIKRO



Brochure  
Metal working



Brochure  
Roller bearing and  
guide rail manufacturing



Brochure  
ANTICORIT VCI



Brochure  
Corrosion protection  
application methods



Brochure  
Process media for steel  
mills



Image Flyer

# PRODUCT BROCHURES INDUSTRY

Request under: [export@fuchs-schmierstoffe.de](mailto:export@fuchs-schmierstoffe.de)



Brochure  
Industrial Lubricants



Brochure  
Hydraulic oils  
RENOLIN



Brochure  
Specialties for the  
hydraulic fluid sector  
RENOLIN



Brochure  
Gear and general  
lubricating oils  
RENOLIN



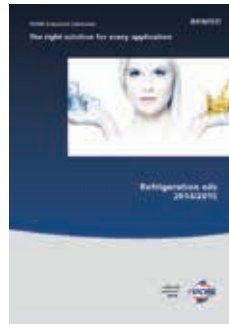
Brochure  
Turbine and air  
compressor oils  
RENOLIN



Brochure  
Slideway oils  
RENEPE



Brochure  
PLANTO



Brochure  
Refrigeration oils  
RENISO



Brochure  
WINDPOWER DIVISION



Brochure  
RENOLIN XtremeTemp



Brochure  
Lubricants for the paper  
industry



Brochure  
Lubricants for Railways

The information contained in this product information is based on the experience and know-how of FUCHS SCHMIERSTOFFE GMBH in the development and manufacturing of lubricants and represents the current state-of-the-art. The performance of our products can be influenced by a series of factors, especially the specific use, the method of application, the operational environment, component pre-treatment, possible external contamination, etc. For this reason, universally-valid statements about the function of our products are not possible. The information given in this product information represents general, non-binding guidelines. No warranty expressed or implied is given concerning the properties of the product or its suitability for any given application.

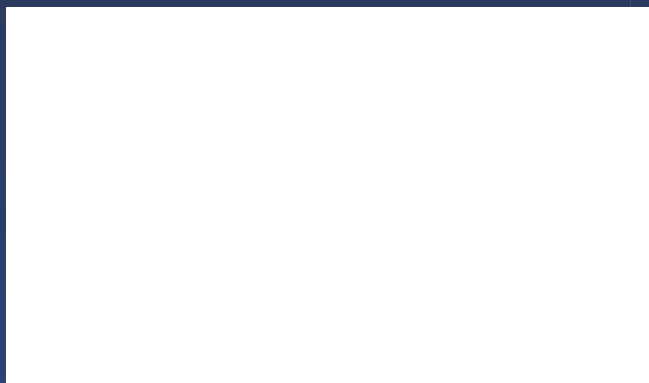
We therefore recommend that you consult a FUCHS SCHMIERSTOFFE GMBH application engineer to discuss application conditions and the performance criteria of the products before the product is used. It is the responsibility of the user to test the functional suitability of the product and to use it with the corresponding care.

Our products undergo continuous improvement. We therefore retain the right to change our product program, the products, and their manufacturing processes as well as all details of our product information sheets at any time and without warning, unless otherwise provided in customer-specific agreements. With the publication of this product information, all previous editions cease to be valid.

Any form of reproduction requires express prior written permission from FUCHS SCHMIERSTOFFE GMBH.

© FUCHS SCHMIERSTOFFE GMBH. All rights reserved. Edition 06/2015

Contact:



**FUCHS SCHMIERSTOFFE GMBH**

Friesenheimer Straße 19  
68169 Mannheim / Germany  
Phone: 0621 3701-0  
Fax: 0621 3701-570  
E-mail: [zentrale@fuchs-schmierstoffe.de](mailto:zentrale@fuchs-schmierstoffe.de)  
[www.fuchs-schmierstoffe.de](http://www.fuchs-schmierstoffe.de)

Export Division  
Friesenheimer Straße 19  
68169 Mannheim / Germany  
Phone: +49 621 3701-1703  
Fax: +49 621 3701-7719  
E-mail: [export@fuchs-schmierstoffe.de](mailto:export@fuchs-schmierstoffe.de)  
[www.fuchs-schmierstoffe.com](http://www.fuchs-schmierstoffe.com)