

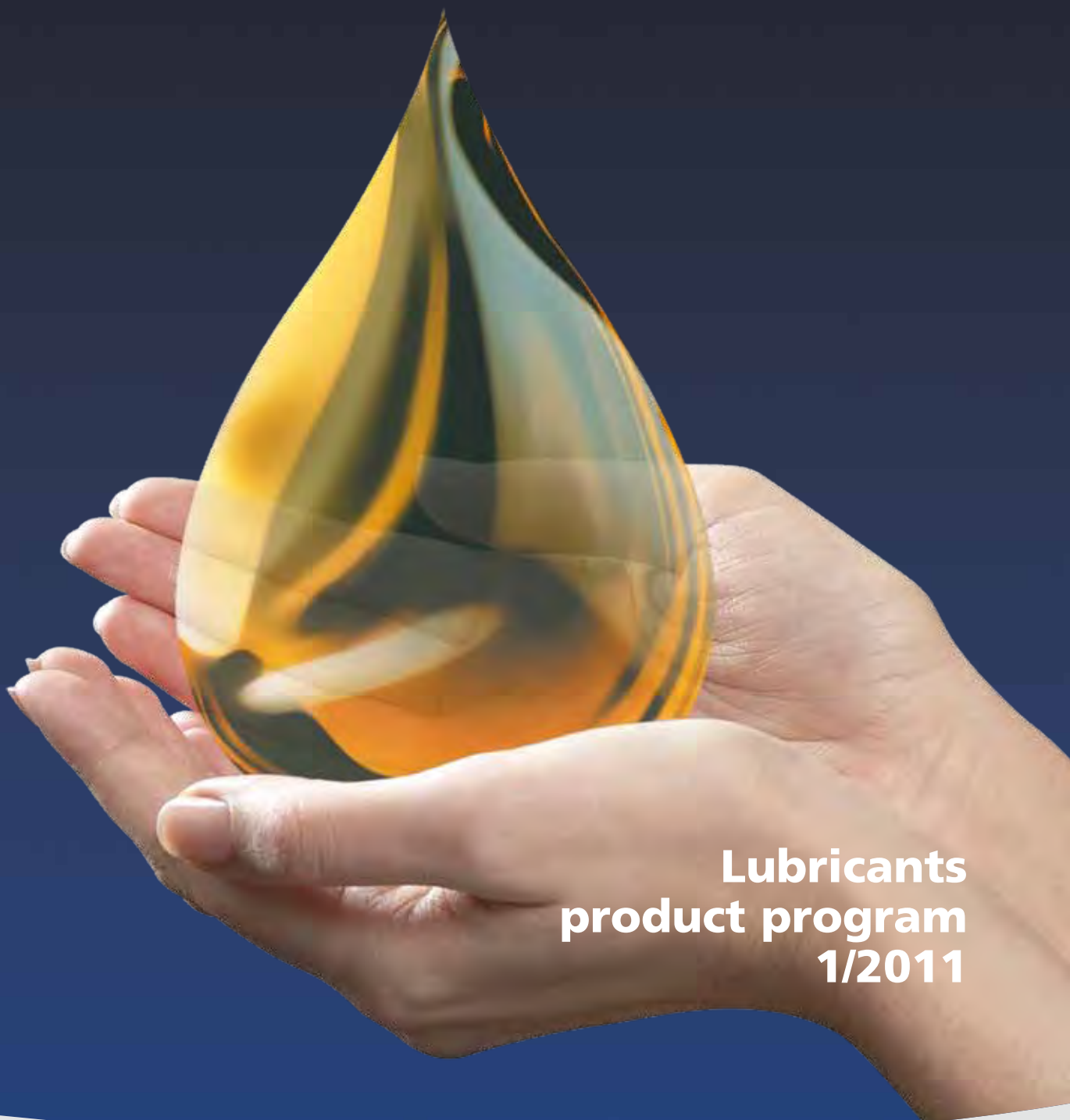
Contact:



**FUCHS EUROPE SCHMIERSTOFFE GMBH**

Friesenheimer Straße 19  
68169 Mannheim / Germany  
Phone: +49 621 3701-0  
Fax: +49 621 3701-570  
E-mail: [zentrale@fuchs-europe.de](mailto:zentrale@fuchs-europe.de)  
[www.fuchs-europe.de](http://www.fuchs-europe.de)

Export Division  
Friesenheimer Straße 19  
68169 Mannheim / Germany  
Phone: +49 621 3701-1703  
Fax: +49 621 3701-7719



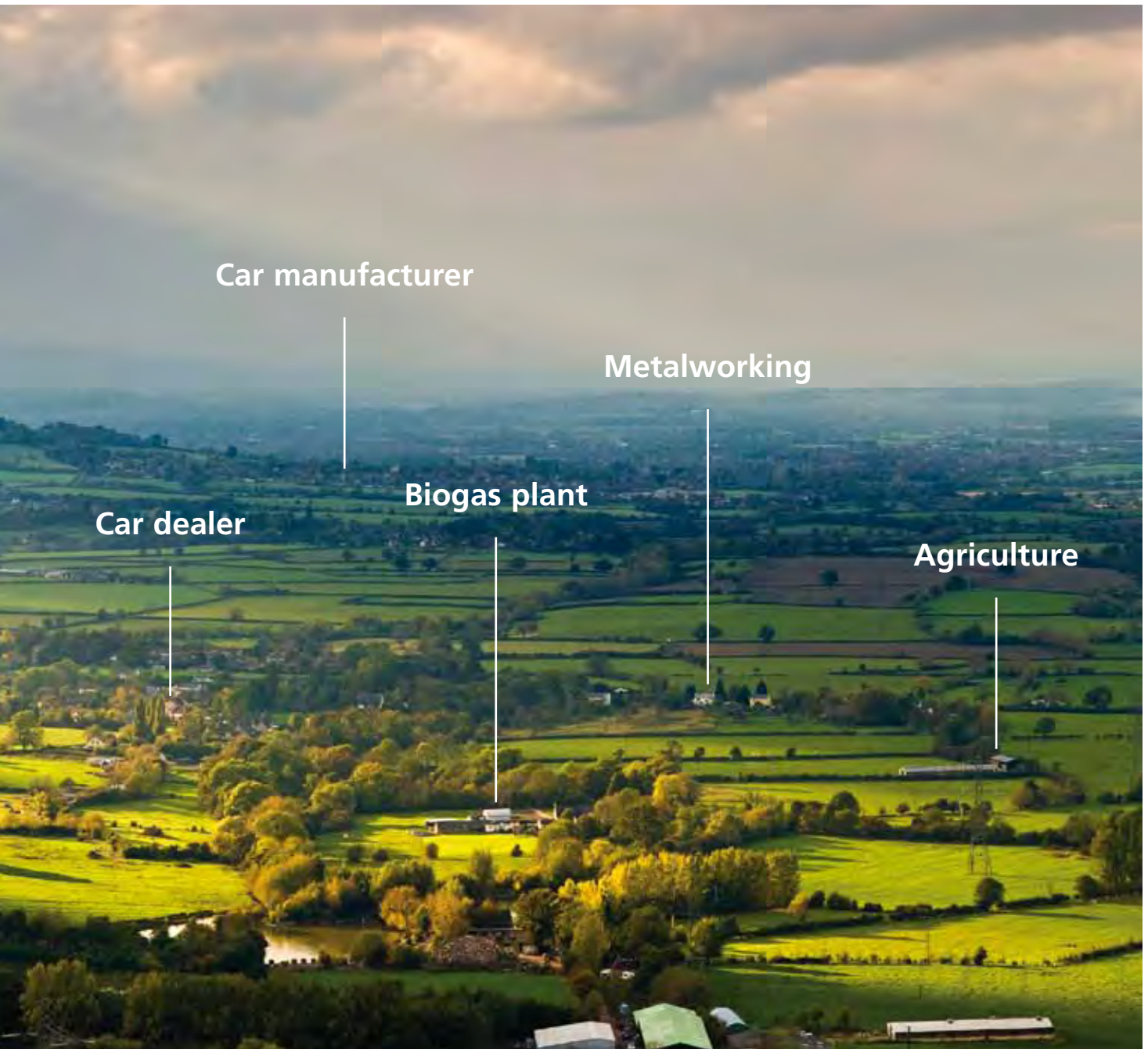
**Lubricants  
product program  
1/2011**





# Proximity.

Only those who know their customers, who listen to them, who are easy to reach and who are prepared to talk to them can develop tailor-made solutions for their partners.



With a highly-effective network of salespeople, application engineers, trading partners and fully-manned offices, we are always near to our customers. This allows us to respond quickly and flexibly to problems. But customer focus for us is not just a customer-oriented consultation and sales organisation. It also determines the motivation of our employees which can react to customer wishes rapidly and with a focus on solutions.

If you need an innovative lubricant for a new High Performance engine, a proven monitoring system for preventative maintenance or want to optimise the use of lubricants throughout your plant: We offer the expertise you need. Expertise which spans from joint development, planning and training to the turnkey introduction and technical service during use.



# Process analysis.

Only those who know and understand your processes can offer optimum solutions.



Whether machining, forming or quenching: The majority of these 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 and 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.

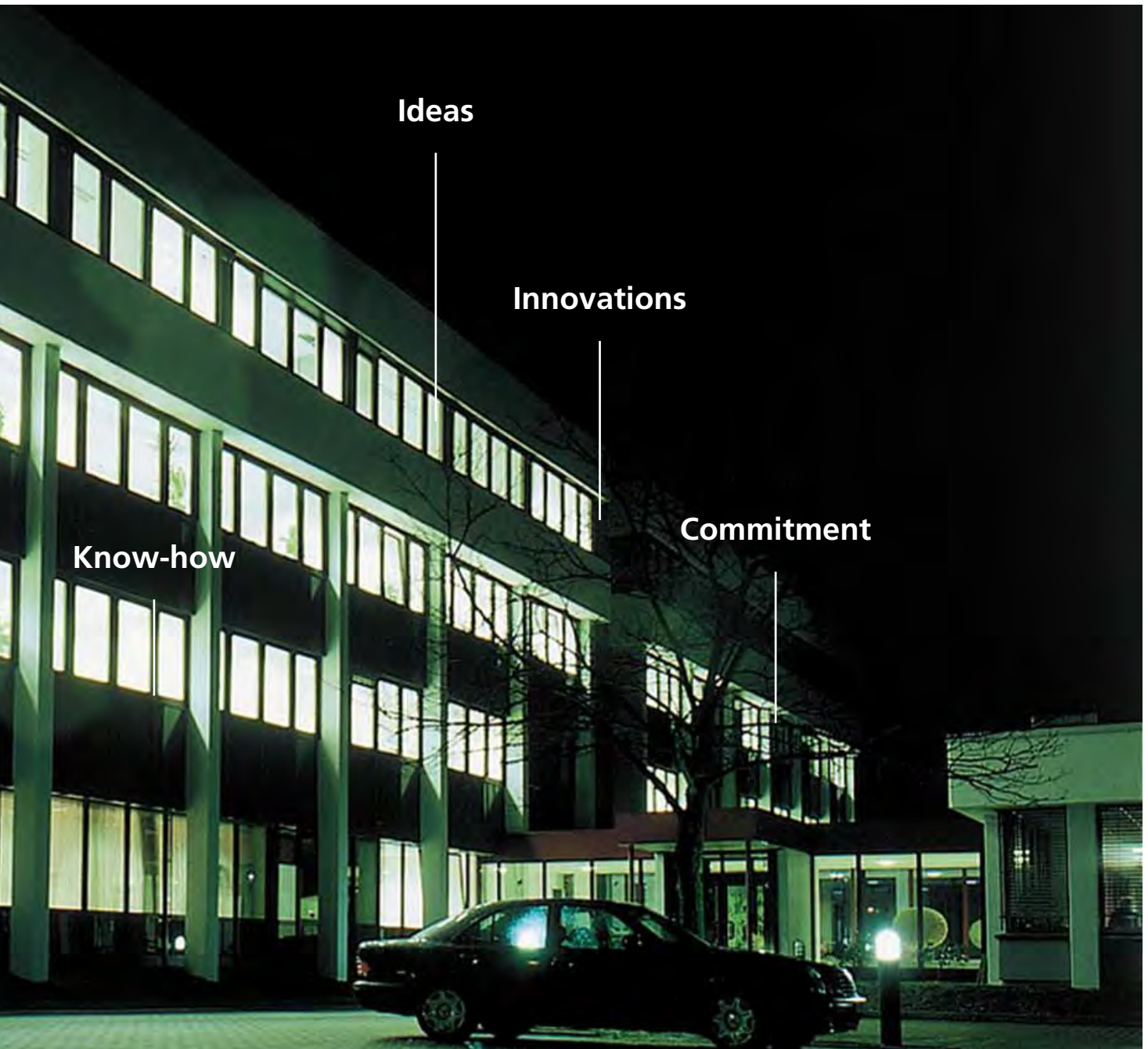


Experience

Reliability

# Real competen

Our clear focus as a lubricant specialist offers decisive benefits.



ce.

Together with our customers we are always on the lookout for the better lubricant. The form, scope and intensity of this cooperation is unique. We call it development partnership. The success of our development partnerships is based on an important fact: FUCHS is not one of the oil giants with its own raw materials and base oils. FUCHS is a multinational independent lubricant specialist.

Our independence is the difference. We are open to new solutions, open for visions – the prerequisites for innovations. And innovation is the defining characteristic of FUCHS. Many of our products are less than five years old and the great majority of our products are individual solutions – just like their demands.





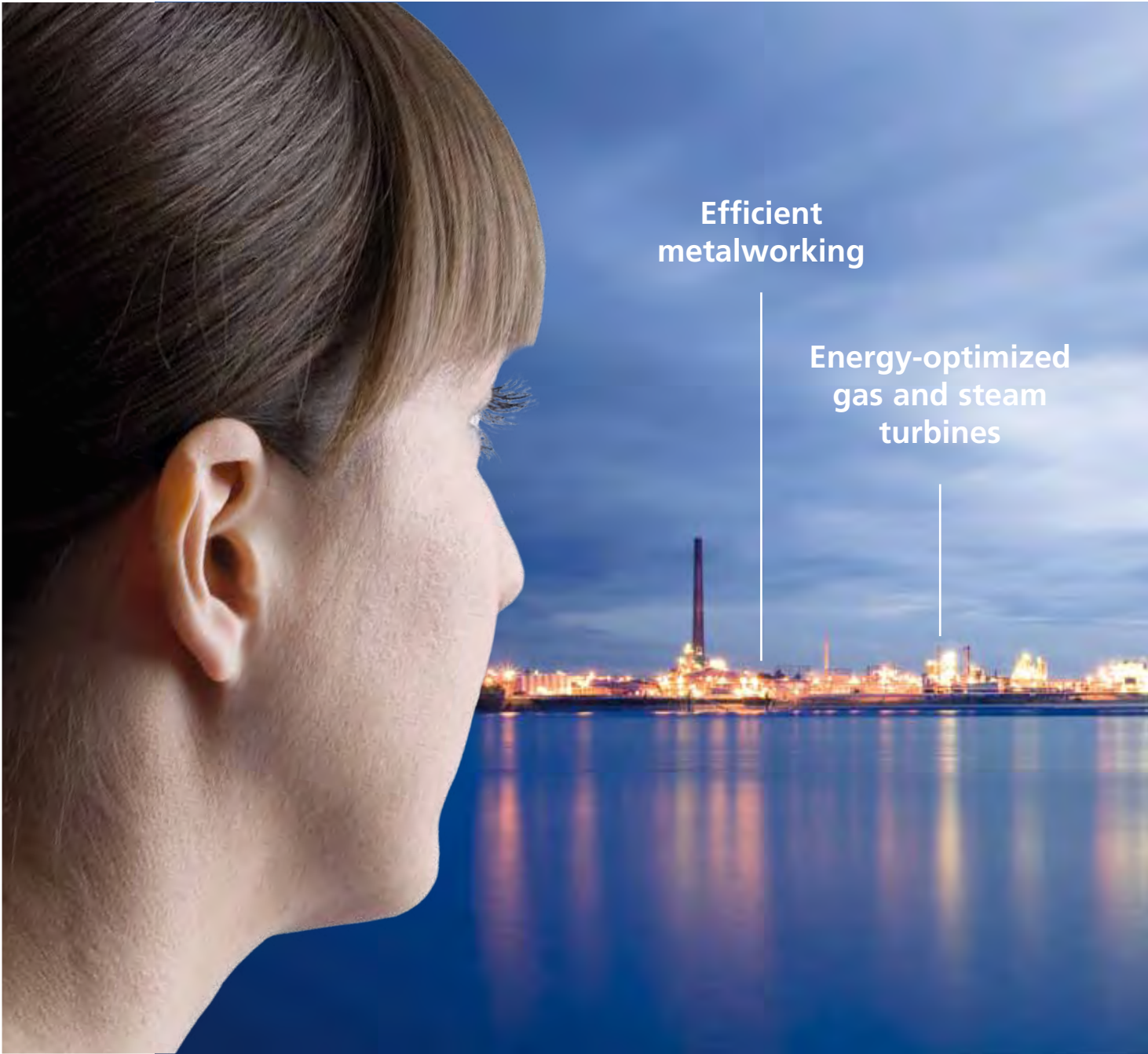
# Mobility.

Our lubricants move from the conception.



Whenever a car, truck, transporter, building machine or agricultural machinery rolls off the line, at least one FUCHS product has been used. In Germany, we are the market leaders in factory-fill engine oils and shock absorber oils. We also play an important role as an OEM development partner and supplier to the international automotive industry.

This can be explained by our extensive know-how, our broad spectrum of products and last but not least, our remarkable flexibility which our customers appreciate. We are an independent lubricant specialist. We respond to ever increasing quality demands and increasing specialisation with creativity and performance which is second to none. It is not for nothing that the TITAN and Silkolene brands enjoy such a good reputation among professionals



Efficient  
metalworking

Energy-optimized  
gas and steam  
turbines

# Future.

Our lubricants help conserve precious resources.



FUCHS is one of the pioneers in the field of developing environmentally friendly and energy-saving products. We received the first award for our PLANTO series back in 1985. Today we are one of the global market leaders in rapidly biodegradable lubricants. In the year 2000, we presented the world's first zinc-free engine oil in the viscosity grade 0W-20.

In recent years, a whole range of efficient, High Performance lubricants for all sorts of applications have been created which make a positive contribution to reducing energy consumption and thus protect resources and the environment.



HIGH-TECH LUBRICANTS  
FOR MOTOR VEHICLES & MACHINERY

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HIGH-TECH LUBRICANTS FOR  
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OILS AND GREASES  
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HIGH-TECH  
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HIGH-TECH  
METAL WORKING FLUIDS

CLEANER AND  
CORROSION PREVENTIVES

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CLEANER AND  
CORROSION PREVENTIVES



The information contained in this product information is based on the experience and know-how of FUCHS EUROPE 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 EUROPE 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. With the publication of this product information, all previous editions cease to be valid.

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# TITAN LUBRICANTS

## FOR MOTOR VEHICLES & MACHINERY



Engine oils for passenger cars		Specifications/ approvals	FUCHS recommendations
<b>TITAN GT1 SAE 0W-20</b> 	Premium Motor Oil with new XTL™-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.		ACEA C2 ACEA A5/B5 API SL ILSAC GF-4
<b>TITAN GT1 PRO FLEX SAE 5W-30</b> 	Premium Motor Oil with new XTL™-technology for maximum 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.	<b>ACEA C3</b> <b>API SM</b> <b>Dexos 2</b>  BMW LONGLIFE-04 MB-APPROVAL 229.51 VW 502 00/ 505 00/ 505 01	ACEA A3/B4 FORD M2C917-A GM-LL-A-025 GM-LL-B-025
<b>TITAN GT1 PRO C-3 SAE 5W-30</b> 	Premium Motor Oil with new XTL™-technology for maximum 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.	BMW LONGLIFE-04 MB-APPROVAL 229.51 VW 504 00/ 507 00	ACEA C3 ACEA A3/B4 FORD M2C917-A PORSCHE C30
<b>TITAN GT1 SAE 5W-40</b> 	Premium Motor Oil with new XTL™-technology for maximum 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.	<b>ACEA C3</b> <b>API SM/CF</b> <b>FORD M2C917-A</b>  BMW LONGLIFE-04 MB-APPROVAL 229.31 PORSCHE A40 RENAULT RN0700/ RN0710 VW 502 00/ 505 00/ 505 01	ACEA A3/B4 FIAT 9.55535-S2
<b>TITAN GT1 PRO C-1 SAE 5W-30</b>	Premium Motor 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.	<b>ACEA C1</b>	ACEA A5/B5 JASO DL-1 FORD WSS-M2C934-B MAZDA
<b>TITAN GT1 PRO C-2 SAE 5W-30</b>	Premium Motor 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.	<b>ACEA C2</b> <b>API SM/CF</b>  PSA B 71 2290 RENAULT RN0700	ACEA A5/B5 FIAT 9.55535-S1 HONDA SUBARU SUZUKI TOYOTA
<b>TITAN GT1 PRO C-4 SAE 5W-30</b>	Premium Motor 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.	<b>ACEA C4</b>  RENAULT RN0720	

# TITAN LUBRICANTS FOR MOTOR VEHICLES & MACHINERY



HIGH-TECH LUBRICANTS FOR  
MOTOR VEHICLES & MACHINERY

Engine oils for passenger cars		Specifications/ approvals	FUCHS recommendations
<b>TITAN Supersyn LONGLIFE PLUS SAE 0W-30</b>	Ultra High Performance, extreme fuel-economy oil for VW engines formulated with fully synthetic base oils. 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 5W-40</b>	Ultra High Performance, fuel-economy oil for a variety of vehicles with or without extended service intervals. Optimum cold starting and lower oil consumption.	ACEA A3/B4 API SM/CF  BMW LONGLIFE-01 MB-APPROVAL 229.5 PORSCHE A40 RENAULT RN0700/ RN0710 VW 501 01/ 502 00/ 505 00	GM-LL-B-025
<b>TITAN Supersyn SAE 0W-30</b>	Ultra High Performance, extreme fuel-economy oil for a variety of vehicles with or without extended service intervals, formulated with fully-synthetic base oils. Excellent cold starting and lower oil consumption.	API SL/CF  VW 502 00/ 503 01/ 505 00	ACEA A3/B4 BMW LONGLIFE-98 MB 229.3
<b>TITAN Supersyn SAE 5W-30</b>	Ultra High Performance, extreme fuel-economy 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-B-025 RENAULT RN0700
<b>TITAN Supersyn F SAE 5W-30</b>	Ultra High Performance, extreme fuel-economy oil for Ford vehicles. Optimum cold starting and lower oil consumption.	ACEA A5/B5 FORD M2C913-C	ACEA A1/B1 FORD M2C913-A FORD M2C913-B JAGUAR M2C913-B
<b>TITAN Supersyn SAE 5W-40</b>	Ultra High Performance, fuel-economy oil for a variety of vehicles with or without extended service intervals. Optimum cold starting and lower oil consumption.	ACEA A3/B4 API SM/CF  BMW LONGLIFE-98 MB-APPROVAL 229.3 PORSCHE A40 VW 502 00/505 00	FIAT 9.55535-H2/ M2/N2/Z2
<b>TITAN Supersyn SAE 5W-50</b>	Ultra High Performance oil for passenger cars. Good 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 oil for passenger cars. Good cold starting behaviour and 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 oil based on MC-synthesis for a variety of gasoline and diesel engines in passenger cars. Good cold starting and lower oil consumption.	ACEA A3/B4 API SL/CF  MB-APPROVAL 229.1	BMW SPECIAL FIAT 9.55535-D2/G2 VW 500 00/505 00



Engine oils for passenger cars		Specifications/ approvals	FUCHS recommendations
<b>TITAN FORMULA 15W-40</b>	High Performance oil specially for all normally aspirated and turbocharged gasoline and diesel engines in passenger cars operated under normal conditions.	ACEA A3/B3/B4 API SL/CG-4  MB-APPROVAL 229.1	FIAT 9.55535-D2/G2 VW 501 01/505 00
Engine oils passenger cars with gas engines		Specifications/ approvals	FUCHS recommendations
<b>TITAN GT1 PRO GAS SAE 5W-30</b>	Premium Gas Motor 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 229.51 VW 502 00	ACEA A3/B4 CHEVROLET FIAT 9.55535-G1 OPEL
<b>TITAN GT1 PRO GAS SAE 5W-40</b>	Premium Gas Motor 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	ACEA A3/B4 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

# TITAN LUBRICANTS FOR MOTOR VEHICLES & MACHINERY



HIGH-TECH LUBRICANTS FOR  
MOTOR VEHICLES & MACHINERY

Engine oils for mixed fleets		Specifications/ approvals	FUCHS recommendations
<b>TITAN UNIMAX ULTRA MC SAE 10W-40</b>	Premium Motor 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>ACEA E7/B4/B3/A3 API CI-4 GLOBAL DHD-1 JASO DH-1</p> <p>CUMMINS CES 20077/8 DEUTZ DQC III-10 MACK EO-M PLUS MAN M 3275-1 MB-APPROVAL 228.3 MB-APPROVAL 229.1 MTU DDC TYPE-2 RENAULT RLD / RLD-2 VOLVO VDS-3</p>	<p>ALLISON C-4 CUMMINS CES 20071/2/6 DAF VW 500 00/501 01 / 505 00</p>
<b>TITAN UNIMAX PLUS MC SAE 10W-40</b>	Ultra High Performance, fuel-economy 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>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 RENAULT RD / RD-2 VOLVO VDS-2</p>	<p>ALLISON C-4 CUMMINS CES 20071/2/6 DAF MACK EO-M PLUS SCANIA</p>
<b>TITAN UNIVERSAL HD SAE 15W-40</b>	High Performance oil for mixed fleets operated under normal conditions. Good performance in normally aspirated and turbocharged diesel engines.	<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 330 G SCANIA STEYR A-202 VOLVO VDS VW 501 01/505 00</p>

# TITAN LUBRICANTS

## FOR MOTOR VEHICLES & MACHINERY



Engine oils for commercial vehicles		Specifications/ approvals	FUCHS recommendations
<b>TITAN CARGO MAXX SAE 5W-30</b>	Premium MAXX Performance, zinc-free, extreme fuel-economy oil for highly-loaded commercial vehicle diesel engines. Specially developed for exhaust after treatment and turbocharger. Optimum cold starting, lower oil consumption and minimized exhaust emissions.	MAN M 3477 MB-APPROVAL 228.51	
<b>TITAN CARGO MAXX SAE 10W-40</b>	Premium MAXX Performance, fuel-economy oil for highly-loaded commercial vehicle diesel engines. Specially developed for exhaust after treatment and turbocharger. Good cold starting, lower oil consumption and minimized exhaust emissions.	ACEA E9/E7/E6 API CI-4 CATERPILLAR ECF-1-a  DEUTZ DQC III-10 LA MACK EO-M PLUS MAN M 3477 / M 3271-1 MB-APPROVAL 228.51 / 235.28 MTU DDC TYPE 3.1 RENAULT RXD/RGD VOITH-RETARDER VOLVO VDS-3 / CNG	CUMMINS CES 20077 DAF MAN M 3277 CRT
<b>TITAN CARGO MAXX LD SAE 10W-40</b>	Premium MAXX Performance, fuel-economy oil for highly-loaded commercial vehicle diesel and gas engines. Specially developed to match the requirements of the SCANIA Low Ash specification for EURO V engines fitted with Diesel particulate filter (DPF). Good cold starting, lower oil consumption and minimized exhaust emissions.	ACEA E7/E6/E4 API CI-4 JASO DH-2  SCANIA LA	
<b>TITAN CARGO SL SAE 5W-30</b>	Ultra High Performance, extreme fuel-economy oil for a variety of commercial vehicle diesel engines, formulated with fully-synthetic base oils. Specially developed for extended service intervals. Optimum cold starting and lower oil consumption.	ACEA E7/E4  CUMMINS CES 20076/7 DAF HP 1/HP 2 DEUTZ DQC IV-10 MAN M 3277 MB-APPROVAL 228.5 / MB-APPROVAL 235.28 MTU DDC TYPE-3 RENAULT RXD, SCANIA LDF VOITH-RETARDER VOLVO VDS-3	CUMMINS CES 20071/2 IVECO 18-1804 TFE MACK EO-M PLUS
<b>TITAN CARGO MC SAE 10W-40</b>	Ultra High Performance, fuel-economy 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.	ACEA E7/E4 API CI-4  CUMMINS CES 20077/8 DEUTZ DQC III-10 MACK EO-M PLUS MAN M 3277 MB-APPROVAL 228.5 MTU DDC TYPE-3 RENAULT RXD/RLD-2 VOLVO VDS-3	DAF IVECO 18-1804 SCANIA LDF-2 SDFG OM-1901A
<b>TITAN CARGO SAE 5W-40</b>	Ultra High Performance, fuel-economy 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 DDC 93K218 MACK EO-O PREMIUM PLUS MAN M 3575 MB-APPROVAL 228.31 VOLVO VDS-4 RENAULT RLD-3	DETROIT DIESEL DDC 93K218

# TITAN LUBRICANTS FOR MOTOR VEHICLES & MACHINERY



HIGH-TECH LUBRICANTS FOR  
MOTOR VEHICLES & MACHINERY

Engine oils for commercial vehicles		Specifications/ approvals	FUCHS recommendations
<b>TITAN CARGO SAE 15W-40</b>	Ultra High Performance, fuel-economy oil for a variety of commercial vehicle diesel engines. Specially developed for Volvo with extended service intervals, exhaust after treatment and turbocharger.	<b>ACEA E9/E7</b> <b>API CJ-4/CI-4 PLUS/CI-4</b> <b>CAT ECF-3</b>  CUMMINS CES 20081 DETROIT DIESEL DDC 93K218 MACK EO-O PREMIUM PLUS MAN M 3575 / 3275-1 MB-APPROVAL 228.31 RENAULT RLD-3 VOLVO VDS-4	ALLISON C-4
<b>TITAN TRUCK PLUS SAE 15W-40</b>	Super High Performance oil for a variety of diesel and gasoline engines. Specially for highly-loaded commercial vehicle diesel engines. Lower oil consumption.	<b>ACEA E7, API CI-4</b> <b>GLOBAL DHD-1</b> <b>CAT ECF-1-a/ECF-2</b>  CUMMINS CES 20076/78 DEUTZ DQC III MACK EO-M PLUS MAN M 3275-1 MB-APPROVAL 228.3 MTU DDC TYPE-2 RENAULT RLD / RLD-2 VOLVO VDS-3	ACEA A3/B4 ALLISON C-4 CAT TO-2 CASE MS 1121 CUMMINS CES 20071/2 DAF IVECO 18-1804 CLASSE T2 E7 NH 330 H STEYR A-201
<b>TITAN TRUCK SAE 15W-40</b>	Super High Performance oil for a variety of diesel engines. Specially for highly-loaded commercial vehicle diesel engines. Lower oil consumption.	<b>ACEA E7</b> <b>API CH-4/SL</b> <b>GLOBAL DHD-1</b>  CUMMINS 20076/7 DEUTZ DQC II MACK EO-M PLUS MAN M 3275-1 MB-APPROVAL 228.3 MTU DDC TYPE-2 RENAULT RD/RD-2 VOLVO VDS-2	ACEA A3/B4 DAF SCANIA
Engine oils for commercial vehicles with gas engines		Specifications/ approvals	FUCHS recommendations
<b>TITAN CARGO PRO GAS SAE 5W-30</b>	Premium Performance, zinc-free, extreme fuel-economy 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.	<b>ACEA E6</b>  MAN M 3477 MAN M 3271-3 MB-APPROVAL 226.9 MB-APPROVAL 235.28 VOITH-RETARDER	
<b>TITAN CARGO PRO GAS SAE 15W-40</b>	Ultra High Performance engine oil specially developed for highly-loaded gas fuelled engines in commercial vehicles. Optimum cold starting, lower oil consumption and minimized exhaust emissions.	<b>API CF</b>  CUMMINS CES 20074	API CF-4 / CG-4 / CF-2 / CE / CD DETROIT DIESEL DDC 93K216

# TITAN LUBRICANTS

## FOR MOTOR VEHICLES & MACHINERY



Monograde engine oils		Specifications/ approvals	FUCHS recommendations
<b>TITAN UNIVERSAL HD SAE 10W</b>	High Performance monograde oils for gasoline and diesel engines. Specially developed for off-road vehicles. Depending upon manufacturer regulation also in other aggregates applicable.	<b>ACEA E2</b> <b>API CF-4/SG</b>  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 oils for gasoline and diesel engines. Specially developed for off-road vehicles. Depending upon manufacturer regulation also in other aggregates applicable.	<b>ACEA E2</b> <b>API CF-4/SG</b>  MAN 270 MB-APPROVAL 228.0	MIL-L-2104 D ALLISON C-4 CAT TO-2 ZF TE-ML 02C
<b>TITAN UNIVERSAL HD SAE 30</b>	High Performance monograde oils for gasoline and diesel engines. Specially developed for off-road vehicles. Depending upon manufacturer regulation also in other aggregates applicable.	<b>ACEA E2</b> <b>API CF-4/SG</b>  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 oils for gasoline and diesel engines. Specially developed for off-road vehicles. Depending upon manufacturer regulation also in other aggregates applicable.	<b>ACEA E2</b> <b>API CF-4/SG</b>  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 oils for gasoline and diesel engines. Specially developed for off-road vehicles. Depending upon manufacturer regulation also in other aggregates applicable.	<b>ACEA E2</b> <b>API CF-4/SG</b>  DEUTZ DQC I-02 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>	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>	Monograde engine oil especially for initial fill of ZF-transmissions.	ZF TE-ML 02H	ACEA E2 API CF MAN 270 MB-APPROVAL 228.0 MTU DDC TYPE-1

# TITAN LUBRICANTS FOR MOTOR VEHICLES & MACHINERY



HIGH-TECH LUBRICANTS FOR  
MOTOR VEHICLES & MACHINERY

Gas engine oils		Specifications/ approvals	FUCHS recommendations
<b>TITAN GANYMET ULTRA</b>	Premium Performance engine oil, zinc-free, for stationary gas engines.	DEUTZ POWER SYSTEMS / MWM MAN M 3271-2 JENBACHER TA 1000-1109	
<b>TITAN GANYMET PLUS</b>	High Performance engine oil, zinc-free, for stationary gas engines.	DEUTZ POWER SYSTEMS/MWM DREYER & BOSSE JENBACHER TA 1000 -1105/ -1109 MDE/MTU ONSITE ENERGY SCHNELL MOTOREN until MY 12/2005	
<b>TITAN GANYMET PLUS LA</b>	„Low Ash“ High Performance engine oil, zinc-free, for stationary gas engines.	DEUTZ POWER SYSTEMS/MWM TEDOM 263.2-1P	CATERPILLAR CUMMINS WAUKESHA
<b>TITAN GANYMET</b>	High Performance engine oil for stationary gas engines.	JENBACHER TA 1000 -1105/ -0125/ -1109 MAN M 3271-2 MDE/MTU ONSITE ENERGY	
<b>TITAN GANYMET LA</b>	„Low Ash“ High Performance engine oil for stationary gas engines.	DEUTZ POWER SYSTEMS/MWM JENBACHER TA 1000 -1107/ -1109 MAN M 3271-2 MDE/MTU ONSITE ENERGY	CATERPILLAR CUMMINS WAUKESHA
Two-stroke engine oils		Specifications/ approvals	FUCHS recommendations
<b>TITAN 2T 100S</b>	Ultra High Performance two-stroke engine oil for Autolube and Premix systems formulated with fully synthetic base oils. Recommended for manufacturer’s mixing ratios up to 1:100.	API TC JASO FD ISO-L-EGD	TISI
<b>TITAN 2T S</b>	Super High Performance two-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 two-stroke engine oil. Mixes rapidly. Suitable for Autolube as well as Premix systems.	API TC	





Gear oils for commercial vehicles		Specifications/ approvals	FUCHS recommendations
<b>TITAN CYTRAC SL SAE 75W-90</b>	Premium 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 MB-APPROVAL 235.8 ZF TE-ML 12B, 16F, 17B	JOHN DEERE JDM J 11 E/G VOLVO 97312 ZF TE-ML 07, 08
<b>TITAN CYTRAC MB SYNTH SAE 75W-90</b>	Premium 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 MAN SYNTH SAE 75W-80</b>	Premium 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.	API GL-4  MAN 341 TYPE Z4 ZF TE-ML 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 retarders or supplementary retarders.	API GL-4  EATON MAN 341 TYPE E3 MAN 341 TYPE Z3 ZF TE-ML 02D	DAF VOLVO 97305 ZF TE-ML 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, 12B, 16F, 17B, 19C, 21B	DAF MAN M 3343 TYP S JOHN DEERE JDM J 11 E/G SCANIA STO 1:0 ZF TE-ML 07
<b>TITAN GEAR HYP LD SAE 80W-90</b>	Super High Performance axle oil specially developed for Mercedes-Benz commercial vehicles. Offering enhanced thermal stability and fuel-economy potential.	API GL-5 API MT-1  MAN 342 TYPE M2 MB-APPROVAL 235.20	MIL-PRF-2105 E ARVIN MERITOR AXLES MACK GO-J JOHN DEERE JDM J 11 E SCANIA STO 1:0 ZF TE-ML 07A

# TITAN LUBRICANTS FOR MOTOR VEHICLES & MACHINERY



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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 M 3343 TYPE M MB-APPROVAL 235.0 ZF TE-ML 02B, 05A, 12E, 16B, 17B, 19B, 21A	CASE MS 1316 FORD M2C197-A JOHN DEERE JDM J 11 E NH 520 A SDFG OP 1705 STEYR B-101 ZF TE-ML 07, 08
<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 J 11 E OPEL 19 42 386 RENAULT VI ZF TE-ML 08
<b>TITAN SUPERGEAR SAE 80W-90</b>	Super High Performance gear oil for extended oil change intervals.	API GL-4/GL-5  MAN M 342 TYPE M2 ZF TE-ML 05A, 12E, 16B, 17B, 19B	MIL-L-2105 D
<b>TITAN SUPERGEAR SAE 85W-140</b>	Super High Performance gear oil for extended oil change intervals.	API GL-4/GL-5  ZF TE-ML 05A, 12E, 16D	MIL-L-2105 D
<b>TITAN GEAR LS SAE 90</b>	High Performance LS (Limited Slip) hypoid gear oil for axles in commercial vehicles and passenger cars with or without limited slip differentials.	API GL-5  ZF TE-ML 05C, 12C, 16E, 21C	CASE MS 1317 MIL-L-2105 D FORD M2C104-A JOHN DEERE JDM J 11 F LIEBHERR NH 520 B
<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 Z1 MB-APPROVAL 235.1 ZF TE-ML 02A, 17A	BMW 81 22 9 407 052 BMW 81 22 9 407 053 EATON FORD M2C9008-A VW TL 726 ZF TE-ML 08
<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 05A, 16C, 17B, 19B, 21A	FORD M2C9102-A JOHN DEERE JDM J 11 E OPEL 19 42 387 VW TL 727 ZF TE-ML 07, 08

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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 J 20 C / D KOMATSU AXO 80 (KES 07.866) KUBOTA UDT MASSEY FERGUSON CMS 1135 / 1143 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: 80	CASE MS 1207/ 1209/1210 FORD M2C86-C/ M2C134-D JOHN DEERE JDM J 20 C/D; JDM J 14 KOMATSU KES 07.866 KUBOTA UDT FLUID MASSEY FERGUSON CMS 1135/ 1143 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	JOHN DEERE JDM J 14 A/C KOMATSU-HANOMAG VOLVO WB 101 ZF TE-ML 03E
<b>TITAN UTTO TO-4</b>	Super High Performance multifunctional transmission and drive-train lubricants for construction machinery.	API GL-4 CAT TO-4 KOMATSU KES 07.868.1  ZF TE-ML 03C, 07F	ALLISON C-4 DANA EATON



Gear oils for passenger cars		Specifications/ approvals	FUCHS recommendations
<b>TITAN SINTOFLUID FE SAE 75W</b>	Premium gear oil offering increased gearbox efficiency in passenger cars due to low viscosity level. Reduces fuel consumption and offers best cold start behaviour. 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 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 gear oil for passenger cars. Offering good gearbox efficiency. Good cold start behaviour. 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 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 cold start behaviour. 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 gear oil for passenger cars. Offering good gearbox efficiency. Suitable for high-offset hypoid drives. Good cold start behaviour. 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 fully-synthetic multifunctional gear oil. Suitable for axles and transfer gear-boxes 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 gear oil for axle and transfer gearboxes, formulated with fully-synthetic base oils. Offers best cold start behaviour. 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 J 11 G SCANIA STO 1:0



Automatic Transmission Fluids (ATF)		Specifications/ approvals	FUCHS recommendations
<b>TITAN ATF 6000 SL</b>	Premium 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.	DEXRON VI VOITH H55.6335.3X (G 607)	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 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.	MAN 339 TYPE V2 MAN 339 TYPE Z2 MB-APPROVAL 236.6 VOITH H55.6336.3X (G 1363) 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
<b>TITAN ATF 5000 SL</b>	Premium ATF for automatic transmission in motor vehicles, power steering systems and torque converters formulated with fully synthetic base oils. Surpasses the low-temperature demands of DEXRON II (E). Longest oil drain intervals in commercial vehicles. Provides optimum and smooth shifting characteristics at all temperatures, also in passenger car applications.	MAN 339 TYPE V2 MAN 339 TYPE Z2 MB-APPROVAL 236.8 VOITH H55.6336.3X (G 1363) ZF TE-ML 04D, 09X, 14B,16L	DEXRON II (E) ALLISON C-4 FORD MERCON RENK-DOROMAT



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.	JASO M315 TYPE 1A	DEXRON III AISIN WARNER/AW-1 BMW MINI 83 22 0 402 413 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 ISUZU BESCO ATF-II/-III JATCO 3100 PL085/FWD (N402)/ JF506E (K17) JWS 3309/TYP E T-IV KIA SP-III MAZDA ATF D-III/M-3 MITSUBISHI SP-II/-III NISSAN Matic C/D/J SAAB 3309 SUBARU ATF OIL/ SPECIAL/HP SUZUKI ATF 3309/3317 TOYOTA TYPE T/T-II/ T-III/T-IV/D-2/WS VW G 052 990/055 025
<b>TITAN ATF 4134</b>	Ultra High Performance ATF, specially developed to optimise shifting performance of Mercedes-Benz automatic transmissions.	MB-APPROVAL 236.14 SSANG YONG (MB-Automatic trans- mission)	
<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.	ALLISON C-4 ALLISON TES 389 DEXRON III (H) MAN 339 TYPE V1 MAN 339 TYPE Z1 MB-APPROVAL 236.1 VOITH H55.6335.3X (G 607) VOLVO 97341 ZF TE-ML 04D, 14A, 17C	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 OPEL 19 40 767 VW TL 521 62 (G 052 162) ZF TE-ML 09, 11B



Automatic Transmission Fluids (ATF)		Specifications/ approvals	FUCHS recommendations
<b>TITAN ATF CVT</b>	Ultra High Performance fluid specially designed for use in many CVT-gearboxes using push-belts or transmission chains made of steel. Developed for Mercedes-Benz A- and B-class.	MB-APPROVAL 236.20 FORD WSS-M2C928-A	BMW 83 22 0 136 376 BMW 83 22 0 429 154 VW TL 521 80 (G 052 180)
<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.	MB-APPROVAL 236.12 VW TL 525 33 (G 052 533)	DEXRON III BMW 83 22 9 407 765 BMW 83 22 9 407 807 FORD M2C195-A FORD M2C202-B FORD M2C922-A1 SSANG YONG
<b>TITAN ATF 3000</b>	Super High Performance DEXRON II (D) ATF for all automatic transmissions in commercial vehicles, machinery and passenger cars according to manufacturer's documentation.	MAN 339 TYPE V1 MAN 339 TYPE Z1 MB-APPROVAL 236.1 VOITH H55.6335.3X (G 607) ZF TE-ML 02F, 03D, 04D, 14A, 17C	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 OPEL 19 40 707 RENK-DOROMAT VOLVO VW ZF TE-ML 09, 11A
<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.	MB-APPROVAL 236.2	TASA MAN 339 TYPE A



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Central hydraulic fluids/steering transmission oil		Specifications/ approvals	FUCHS recommendations
<b>TITAN ZH 4300 B</b>	Premium performance central hydraulic fluid formulated with fully-synthetic base oils.	MAN M 3289	BMW 81 22 9 407 758 BMW 82 11 1 468 041 BMW 83 29 0 429 576 FORD M2C204-A OPEL 19 40 715 OPEL 19 40 766 PSA 571 2710 VOLVO 1161529 VW TL 521 46 (G 002 000/A7/A8/G 004 000)
<b>TITAN ZH 5364 B</b>	Premium performance central hydraulic fluid approved by Mercedes-Benz for level control systems in passenger cars formulated with fully-synthetic base oils.	MB-APPROVAL 344.0	
<b>TITAN ZH 3044</b>	Ultra High Performance Power Steering and Central Hydraulic Fluid for automotive applications.		AUDI/VW G 004 000 M2 PORSCHE 000 043 206 56 SAAB 93160548 VOLVO 307 414 24
<b>TITAN ZH LHM PLUS</b>	Ultra High Performance central hydraulic fluid specially designed for the use in Citroën and Peugeot vehicles.		ISO 7308 BMW 81 22 9 407 549 CASE FIAT 9.55597 IVECO 18-1823 MASSEY FERGUSON NH 610 A 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.	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 51524-3 HV according to ISO 11158	



# AGRIFARM LUBRICANTS FOR AGRICULTURAL MACHINERY



AGRIFARM STOU oils		Specifications/ approvals	FUCHS recommendations
<b>AGRIFARM STOU MC PRO SAE 10W-40</b>	Premium SHPD multifunctional oil (STOU/ MFO) of the latest generation for agricultural vehicles.	SAE J300: SAE 10W-40 SAE J306: SAE 75W-90  DEUTZ DQC III	ACEA E7(E5/E3),E4 API CI-4, API GL-3/GL-4/API GL-5 in Traktoren 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 J20 C NEW HOLLAND 82009201/2/3 NH 030C, NH 330G, HN 330H, NH 410B, HN 420A, NH 526C MASSEY FERGUSON CMS M 1145 (1135/1139/1143/ 1144) ZF TE-ML 06A, 06B, 06C, 06F, 06L, 07B * without HOLMER
<b>AGRIFARM STOU MC SAE 10W-30</b>	MC-synthesis, multifunctional, fuel-economy oil (STOU/MFO) for engines, manual gearboxes, wet brakes, hydraulics and turbo- drives in tractors and other agricultural machinery.	SAE J300: SAE 10W-30 SAE J306: SAE 75W-80 API CG-4 API GL-4  DEUTZ DQC I ZF TE-ML 06B, 06F, 07B	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 NH 82009201/2/3 NH 410 B NH 420 A MASSEY FERGUSON CMS M 1145 (1135/1139/1143/1144) ZF TE-ML 06A, 06C

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AGRIFARM STOU oils		Specifications/ approvals	FUCHS recommendations
<b>AGRIFARM STOU MC SAE 10W-40</b>	Multipurpose low-friction 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.	<p>SAE J300: SAE 10W-40 SAE J306: SAE 75W-90 API CG-4 API GL-4</p> <p>DEUTZ DQC I ZF TE-ML 06B, 06F, 07B</p>	<p>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 J 20 C NEW HOLLAND 82009201/2/3 NH030C, NH330G, NH410B, NH420A, NH 526C MASSEY FERGUSON CMS M 1145 (1135/1139/1143/1144) ZF TE-ML 06A, 06C, 06L * without HOLMER</p>
<b>AGRIFARM STOU SAE 15W-30, 15W-40</b>	Multipurpose lubrication oil (STOU / MFO) for engines, manual gearboxes, wet brakes, hydraulics in tractors and other agricultural equipment.	<p>API CF-4 API GL-4</p>	<p>ACEA E2 CNH MAT 3525, 3526 DIN 51524 : HLP (-D) FNHA 200.00, 201.00 FORD M2C134-D, M2C159-B/C JOHN DEERE JDM J 20 C MASSEY FERGU- SON CMS M 1145 (1135/1139/1143/1144) NH 82009201/2/3 NH 420 A SDFG OU 1391 OT 1891 STEYR D-401 ZF TE-ML 06A, 06B, 06C, 07B</p>

# AGRIFARM LUBRICANTS FOR AGRICULTURAL MACHINERY



AGRIFARM engine oils		Specifications/ approvals	FUCHS recommendations
<b>AGRIFARM MOT SAE 10W-40</b>	AGRIFARM MOT SAE 10W-40 is an advanced, High Performance engine oil incorporating 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. AGRIFARM MOT 10W-40 is recommended for normally aspirated and turbocharged engines.	<p>ACEA E7 API CI-4 GLOBAL DHD-1 JASO DH-1</p> <p>DEUTZ DQC III</p>	<p>ALLISON C-4 CUMMINS CES 20071/2/6/7/8 DAF MACK EO-M PLUS MAN M 3275 MTU DDC TYPE-2 RENAULT RLD / RLD-2 VOLVO VDS-3</p>
<b>AGRIFARM MOT SAE 15W-40</b>	AGRIFARM MOT SAE 15W-40 is a super-long-life, all-season, SHPD oil for normally aspirated and turbocharged diesel engines in tractors and other machinery which make high demands on service intervals and engine cleanliness.	<p>ACEA E7 API CI-4 GLOBAL DHD-1 CAT ECF-1-a/ECF-2</p> <p>DEUTZ DQC III</p>	<p>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 MTU DDC TYPE-2 NH 330 H RENAULT RLD / RLD-2 STEYR A-201 VOLVO VDS-3</p>

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AGRIFARM UTTO oils		Specifications/ approvals	FUCHS recommendations
<b>AGRIFARM UTTO MP</b>	AGRIFARM UTTO MP for corresponding systems fitted with integrated wet brakes and/or wet clutches in agricultural and other machinery.	SAE J300: 15W-30 SAE J306: 75W-80 API GL-4  ZF TE-ML 03E, 05F, 17E	AGCO Powerfluid 821 XL AGCO Q-186 (Whitefarm) ALLISON C-4 CASE MS 1317, 1230, 1210, 1209, 1207, 1206 CLAAS / LANDINI / SAME-Transmission CNH MAT 3525, 3526, 3510, 3509, 3506, 3505 FNHA-2-C-200.00 / -201.00 FORD M2C48-C3 ESN M2C86-B/C FORD M2C134-D JOHN DEERE JDM J20C MASSEY FERGUSON CMS M 1145 (1135/1141/1143) NH 410 B SDFG OT 1891 A ZF TE-ML 06K
<b>AGRIFARM UTTO LN</b>	AGRIFARM UTTO LN was developed as a problem-solver for tractors in which conventional UTTO oils led to noisy wet brakes.	SAE J300: 20W-30, SAE J306: 80W-85 API GL-4	AGCO Powerfluid 821 XL AGCO Q-186 (Whitefarm) ALLISON C-4 CASE MS 1317, 1230, 1210, 1209, 1207, 1206 CNH MAT3505, 3506, 3509, 3510, 3525, 3526 FNHA-2-C-200.00 / -201.00 FORD M2C48C3 ESN M2C86-B/C FORD M2C134-D JOHN DEERE JDM J20C MASSEY FERGUSON CMS M 1141/1135 CLAAS / LANDINI / SAME-Transmission / DEUTZ-FAHR FENDT (non Vario)
AGRIFARM gear oils		Specifications/ approvals	FUCHS recommendations
<b>AGRIFARM GEAR SAE 80W-90</b>	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 520 A STEYR B-101
<b>AGRIFARM GEAR SAE 85W-140</b>	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>	Special EP gear oil for axles fitted with limited-slip differentials in agricultural and other machinery.	API GL-5	CASE MS 1317 NH 520 B SDFG OP 1705 LS ZF TE-ML 05C, 12C, 16E

# AGRIFARM LUBRICANTS FOR AGRICULTURAL MACHINERY



AGRIFARM greases		Specifications/ approvals	FUCHS recommendations
<b>AGRIFARM PROTEC 2</b>	Based on lithium/calcium soap, selected base oils and special additives, AGRIFARM PROTEC 2 is a high-quality, ageing-resistant long-life grease. It provides good EP performance, good wear and corrosion protection, excellent water resistance, good working stability and displays good adhesion to metals.	KP 2 K-20 ISO-L-X-BCHB 2	
<b>AGRIFARM HITEC 2</b>	AGRIFARM HITEC 2 is an all-round, lithium complex soap grease for long-term lubrication. It displays good thermal and mechanical resistance, good working stability, water-resistance and out-standing corrosion protection.	KP 2 P-20 ISO-L-X-BEEB 2	
<b>AGRIFARM FLOWTEC 000</b>	AGRIFARM FLOWTEC 000 is a high-quality, ageing-resistant semi-fluid grease based on a lithium soap, selected base oils and special additives offering excellent corrosion protection. It is temperature-stable, provides good EP performance, reduces wear, is water-resistant, displays good adhesion to metals and is fully suitable for central lubrication systems even at low temperatures.	GP 00/000 G-40 ISO-L-X-DBIB 00/000	MAN 283 Li-P 00/000 LINCOLN WILLY VOGEL

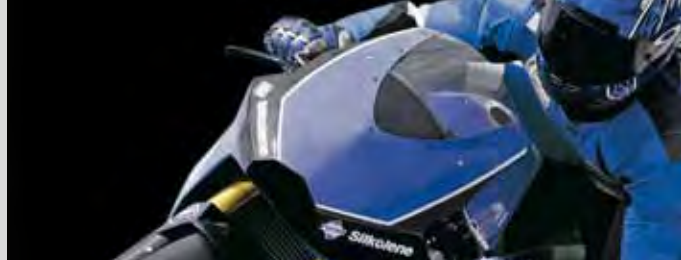
# AGRIFARM LUBRICANTS FOR AGRICULTURAL MACHINERY



AGRIFARM hydraulic oil		Specifications/ approvals	FUCHS recommendations
<b>AGRIFARM HYDRATEC HVI 46</b>	EP-lubricating and hydraulic oil with high viscosity index.	DIN 51524-3, HVLP HVLP ISO 6743-4: HV	CASE MS 1230 Cincinnati Milacron DENISON HFO Bosch Rexroth Vickers US Steel NH 646 H SDFG OI 1446 HV
AGRIFARM chain saw oil		Specifications/ approvals	FUCHS recommendations
<b>AGRIFARM CHAIN SAW OIL</b>	AGRIFARM CHAIN SAW OIL is a high viscosity, highly-adhesive lubricant 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>	AGRIFARM MILKING MACHINE OIL is a universal milking machine oil and was specially developed for use in the vacuum pumps of milking machines. It contains additives which protect against wear and corrosion and combat foaming. These features increase the functional reliability of such systems.		ALFA LAVAL WESTFALIA

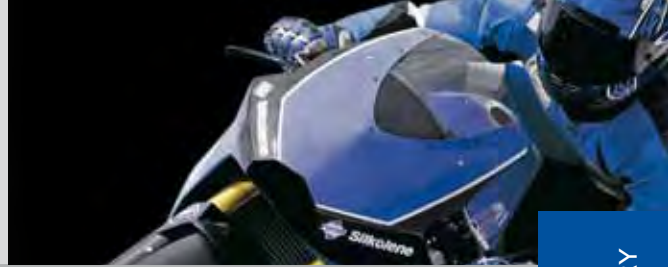
HIGH-TECH LUBRICANTS FOR  
MOTOR VEHICLES & MACHINERY

# Silkolene<sup>®</sup> MOTORCYCLE LUBRICANTS AND FLUIDS



<b>RACE – For professional racers and everybody who rides at the limit</b>		<b>Specifications/ approvals</b>	<b>FUCHS recommendations</b>
<b>SILKOLENE PRO R SAE 0W-20</b>	<b>Electrosyntec<sup>®</sup>-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 SAE 10W-60</b>	<b>Electrosyntec<sup>®</sup>-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	JASO MA JASO MA2
<b>SILKOLENE PRO 4 SAE 10W-40 SAE 15W-50</b>	<b>Electrosyntec<sup>®</sup>-Technology</b> Fully-synthetic four-stroke racing engine oil for all highly-tuned motorcycle engines.	API SG/SH/SJ	JASO MA 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.		
<b>SILKOLENE PRO 2</b>	<b>Electrosyntec<sup>®</sup>-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.		
<b>SILKOLENE COMP 2 PLUS</b>	<b>Electrosyntec<sup>®</sup>-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 PRO RSF 2,5WT/5WT/7,5WT/ 10WT/15WT</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.		

# Silkolene<sup>®</sup> MOTORCYCLE LUBRICANTS AND FLUIDS

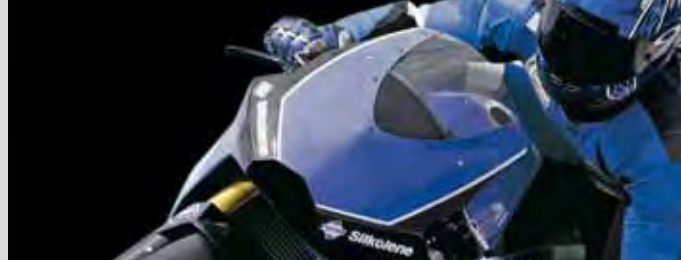


HIGH-TECH LUBRICANTS FOR  
MOTOR VEHICLES & MACHINERY

RIDE – For the tourer and street rider		Specifications/ approvals	FUCHS recommendations
<b>SILKOLENE COMP 4</b> <b>SAE 10W-30</b> <b>SAE 10W-40</b> <b>SAE 15W-50</b> <b>SAE 20W-50</b>	<b>Electrosyntec<sup>®</sup>-Technology</b> Synthetic four-stroke engine oil. Various viscosities for engines with shared engine, gear-box and clutch lubrication.	API SG/SH/SJ	JASO MA JASO MA2
<b>SILKOLENE SUPER 4</b> <b>SAE 15W-40</b>	Four-stroke engine oil formulated with selected base oils. The balance formulation has been specially developed and approved for BMW motorcycles. The outstanding additive technology is suitable for BMW motorcycles with and without wet clutches.	API SF/SG BMW Motorrad	JASO MA
<b>SILKOLENE SUPER 4</b> <b>SAE 10W-40</b> <b>SAE 20W-50</b>	MC-synthesis four-stroke engine oil. High-quality standard product offering excellent protection.	API SF/SG	JASO MA JASO MA2
<b>SILKOLENE V-TWIN</b> <b>SAE 20W-50</b>	Mineral four-stroke engine oil. Specially developed for Harley-Davidson and European/Japanese Metric V-Twins.	API SJ	
<b>SILKOLENE COMP 2</b> <b>INJECTOR</b>	<b>Electrosyntec<sup>®</sup>-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 ISO-L-EGD	
<b>SILKOLENE SUPER 2</b> <b>INJECTOR</b>	MC-synthesis two-stroke engine oil. Reduces wear and guarantees long engine life. Suitable for Premix and Autolube systems.	API TC JASO FB	
<b>SILKOLENE V-TWIN</b> <b>SAE 80W-90</b>	Synthetic gear oil specially developed for Harley-Davidson and European/Japanese Metric V-Twins.	API GL-5	



# Silkolene<sup>®</sup> MOTORCYCLE LUBRICANTS AND FLUIDS



OFF-ROAD – For all enduro and motorcross riders		Specifications/ approvals	FUCHS recommendations
<b>SILKOLENE PRO 4 SX SAE 15W-50</b>	<b>Electrosyntec<sup>®</sup>-Technology</b> Fully-synthetic four-stroke engine oil based on synthetic esters. Specially formulated for use in large-volume single and twin off-road motorcycles.	API SF/SG/SH	JASO MA JASO MA2
<b>SILKOLENE COMP 4 SX SAE 10W-40</b>	<b>Electrosyntec<sup>®</sup>-Technology</b> Synthetic four-stroke engine oil for engines with shared engine, gearbox and clutch lubrication.	API SF/SG/SH	JASO MA JASO MA2
<b>SILKOLENE SUPER 4 SX SAE 10W-40</b>	High-quality, mineral oil-based four-stroke engine oil offering reliable protection.	API SG	JASO MA JASO MA2
<b>SILKOLENE PRO 2 SX</b>	<b>Electrosyntec<sup>®</sup>-Technology</b> Fully-synthetic two-stroke engine oil based on synthetic esters. Developed using aerospace technology. Specially formulated for the extreme temperatures and stresses of racing. Not miscible with conventional two-stroke oils. Only suitable for Premix systems.		
<b>SILKOLENE COMP 2 PLUS SX</b>	<b>Electrosyntec<sup>®</sup>-Technology</b> Fully-synthetic two-stroke engine oil based on synthetic esters. For the greatest reliability under extreme conditions. Suitable for Premix and Autolube systems.	API TC JASO FC ISO-L-EGD	
<b>SILKOLENE COMP 2 PREMIX</b>	<b>Electrosyntec<sup>®</sup>-Technology</b> Synthetic two-stroke engine oil. Excellent reliability under extreme conditions. Only suitable for Premix systems.	API TC JASO FB	
<b>SILKOLENE SUPER 2 SX</b>	Synthetically-modified two-stroke engine oil. For all two-stroke, off-road motorcycles. Only suitable for Premix systems.	API TC JASO FB	

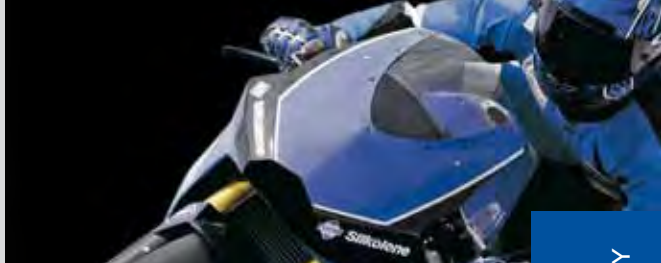


QUADS ATV – For professionals and fun bikers		Specifications/ approvals	FUCHS recommendations
<b>SILKOLENE QUAD ATV SAE 5W-40</b>	Fully-synthetic four-stroke engine oil for highly-stressed Quads and ATVs. Offers first-class quality and reliable protection against wear.	API SG/SH/SJ	JASO MA JASO MA2
<b>SILKOLENE QUAD ATV SAE 10W-40</b>	MC-synthesis four-stroke engine oil specially developed for Quads and ATVs. Standard, high-quality product for reliable protection.	API SG	JASO MA JASO MA2
SCOOTER – The name says it all		Specifications/ approvals	FUCHS recommendations
<b>SILKOLENE SCOOT SPORT 4 SAE 5W-40</b>	<b>Electrosyntec<sup>®</sup>-Technology</b> Fully-synthetic four-stroke engine oil for scooters and mopeds. Perfect for high-tech, four-stroke scooters.	API SG/SH/SJ	JASO MA JASO MA2
<b>SILKOLENE SCOOT 4 SAE 10W-40</b>	<b>Electrosyntec<sup>®</sup>-Technology</b> Synthetic four-stroke engine oil for scooters and mopeds. Perfect for high-tech, four-stroke scooters.	API SG/SH/SJ	JASO MA JASO MA2
<b>SILKOLENE PRO SCOOT</b>	<b>Electrosyntec<sup>®</sup>-Technology</b> Fully-synthetic two-stroke engine oil for High Performance scooters. Suitable for Premix and Autolube systems.	API TC JASO FC ISO-L-EGD	
<b>SILKOLENE SCOOT SPORT 2</b>	<b>Electrosyntec<sup>®</sup>-Technology</b> Synthetic two-stroke engine oil for highly-stressed scooter engines. Suitable for Premix and Autolube systems.	API TC JASO FC ISO-L-EGD	
<b>SILKOLENE SCOOT 2</b>	<b>Electrosyntec<sup>®</sup>-Technology</b> MC-synthesis two-stroke engine oil for scooters and mopeds. Suitable for Premix and Autolube systems.	API TC JASO FC	
<b>SILKOLENE SCOOTER GEAR OIL SAE 80W-90</b>	<b>Electrosyntec<sup>®</sup>-Technology</b> Mineral, High Performance gear oil specially developed for use in scooters and mopeds.	API GL-4	



<b>MAINTAIN – Maintenance and protection for your bike</b>		<b>Specifications/ approvals</b>	<b>FUCHS recommendations</b>
<b>SILKOLENE PRO SRG 75 SAE 75W</b>	Fully-synthetic, ester-based racing gear oil. Excellent protection against wear and easy shifting even at extreme temperatures.	API GL-4	
<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 MIL-L-2105 B	
<b>SILKOLENE PRO 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 FORK OIL SAE 5W/10W/15W/20W/30</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.		

# Silkolene<sup>®</sup> MOTORCYCLE LUBRICANTS AND FLUIDS



HIGH-TECH LUBRICANTS FOR  
MOTOR VEHICLES & MACHINERY

MAINTAIN – Maintenance and protection for your bike		Specifications/ approvals	FUCHS recommendations
<b>SILKOLENE TITANIUM CHAIN 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 CHAIN CLEANER</b>	Highly effective cleaner for all drive chains. Effectively removes caked residue. Excellent basis for optimum chain maintenance.		
<b>SILKOLENE BRAKE CLEANER</b>	Brake cleaner spray to remove difficult-to-dislodge dirt.		
<b>SILKOLENE ENGINE CLEANER</b>	Engine cleaner spray to remove all manner of dirt.		
<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.		
<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.		

# RENOLIT

## GREASES



Greases		Specifications/ approvals	FUCHS recommendations
<b>RENOLIT AUTO MPG</b>	Lithium thickened, multipurpose grease for plain and roller bearings, -30 °C to +120 °C.	K 2 K-20 ISO-L-X-BCEA 2	
<b>RENOLIT AUTO EP</b>	Lithium thickened, EP multipurpose grease for plain and roller bearings, -30 °C to +120 °C.	K 2 K-20 ISO-L-X-BCEA 2	
<b>RENOLIT AUTO BLACK</b>	Lithium thickened, universal grease with black solid lubricants, highly EP-loadable, -30 °C to +120 °C.	KPF 2 K-20 ISO-L-X-BCEA 2	
<b>RENOLIT MP</b>	Standard, multipurpose EP grease. Suitable for low temperatures. -40 °C to +120 °C.	KP 2 K-40 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 1/2, -40 °C to +120 °C.	KP 2 K-40 ISO-L-X-DCEB 2 MAN 283 Li-P 2 VW TL 735 Stabilus 100 15833	
<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 Südzucker Central lubrication system of Baier & Köppel LINCOLN and WILLY VOGEL	
<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.	GP 00/000 G-40 ISO-L-X-DBIB 00/000 MAN 283 Li-P 00/000 MB-APPROVAL 264.0 Schaeffler Central lubrication system of LINCOLN und WILLY VOGEL	
<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 Bucyrus MAN 285 Li-PF 2	

# RENOLIT

## GREASES



HIGH-TECH LUBRICANTS FOR  
MOTOR VEHICLES & MACHINERY

Greases		Specifications/ approvals	FUCHS recommendations
<b>RENOLIT CX-HT 2</b> <b>Also available for use in FUCHS system grease guns.</b> <b>Also in NLGI grade 0 available.</b>	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 DURAPLEX EP 2</b> <b>Also available for use in FUCHS system grease guns. Also in NLGI grade 1 and 3 available.</b>	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> <b>Also in NLGI grade 1/2 and 3 available.</b>	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 Schaeffer SAF Holland John Deere DB-Kenndatenblatt 106 223, Gelenkwellen	



MAINTAIN brake fluids		Specifications/ approvals	FUCHS recommendations
<b>MAINTAIN DOT 5.1</b>	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>	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 J1703/J1704	FORD M6C62-A FORD M6C9103-A NH 800 A OPEL 19 42 421
MAINTAIN antifreeze		Specifications/ approvals	FUCHS recommendations
<b>MAINTAIN FRICOFIN DP</b>	Coolant additive based on monoethylene glycol. Free from nitrite, amine and phosphate.	ASTM D3306 SAE J 1034	SCANIA TB 1451 VW TL 774-G
<b>MAINTAIN FRICOFIN LL</b>	Coolant additive based on monoethylene glycol. Free from nitrite, amine, phosphate and silicates.	ASTM D 3306, D 4985 BS 6580 KSM 2142 FORD WSS-M97-B44-D  DAF 74002 DEUTZ TR 0199-99-1115 MAN 324 SNF MB-APPROVAL 325.3 MWM TRO199-99-2091	AFNOR NFR 15-601 SAE J1034 NATO S-759 CUMMINS (ISBe engines at DAF and Leyland) GM 6277M, IRISBUS, JASO M325, JIS K2234 KOBELCO, KOMATSU (different colour and ready to use) LIEBHERR MD 1-36-130 PSA B 71 5110 RENAULT Type D VW TL 774 D/F (different colour), VOLVO 128 6083/002 (=VOLVO TRUCKS, VOLVO CE, from MY 2005) WAUKESHA YANMAR
<b>MAINTAIN FRICOFIN G 12 PLUS</b>	Coolant additive based on monoethylene glycol. Free from nitrite, amine, phosphate and silicates.	ASTM D 3306-05, ASTM D 4985, AFNOR NF R 15-601 BS 6580:1992, SAE J1034  MAN 324 SNF MB-APPROVAL 325.3 MTU MTL 5048	CITROËN, GM 6277M PORSCHE RENAULT SCANIA TI 02-98 0813 T/B/M sv VW TL 774 D/F (G 12 PLUS)
<b>MAINTAIN FRICOFIN</b>	Coolant additive based on monoethylene glycol. Free from nitrite, amine and phosphate.	ASTM D 3306-05, ASTM D 4985 AFNOR NF R 15-601 BS 6580:1982, SAE J1034  DEUTZ JENBACHER TA 1000-0201 MAN 324 NF MAN 324 NF PRITARDER MB-APPROVAL 325.0 MTU MTL 5048 PN-C 40007:2000	BMW N 600 69.0 BOMAG LIEBHERR TLV 035/ TLV 23009 A OPEL/GM B 040 0240 VW TL 774-C (G 11)
<b>MAINTAIN FRICOFIN S</b>	Coolant additive based on monoethylene glycol. Free from nitrite, amine and phosphate.	ASTM D 3306-05 Ö-NORM V 5123 AFNOR NF R 15-601 BS 6580:1992 SAE J1034	

## SPECIALTIES






<b>MAINTAIN washer fluid additive</b>		<b>Specifications/ approvals</b>	<b>FUCHS recommendations</b>
<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.		
<b>MAINTAIN diesel fuel additives</b>		<b>Specifications/ approvals</b>	<b>FUCHS recommendations</b>
<b>MAINTAIN DIESEL EFFECT</b>	Fuel additive concentrate improving Diesel fuel properties for singular as well as constant treatment.		
<b>MAINTAIN WINTERFIT</b>	Diesel fuel and heating oil additive to prevent waxing and plugging at low temperatures.		
<b>Specialties – Corrosion protection</b>		<b>Specifications/ approvals</b>	<b>FUCHS recommendations</b>
<b>ANTICORIT S 2000 A</b>	Synthetic coolant additive.	MWM	
<b>ANTICORIT DFG</b>	Spray and penetrating oil with MoS <sub>2</sub> solid lubricants.		
<b>ANTICORIT 5F</b>	Surface protection spray.		
<b>ANTICORIT OHK</b>	Contact and engine protection spray.		
<b>ANTICORIT BW 366</b>	Corrosion preventive wax spray with effective barrier function. Underfloor and cavity protection.		
<b>ANTICORIT SYNTH</b>	Fully-synthetic corrosion dissolving spray with excellent penetrating effect.		
<b>Specialties – Fitting products</b>		<b>Specifications/ approvals</b>	<b>FUCHS recommendations</b>
<b>RENOLIT GL 1</b>	Fitting product. Spray grease for hinges, joints and diverse movable small lubrication applications.		
<b>Specialties – Cleaner</b>		<b>Specifications/ approvals</b>	<b>FUCHS recommendations</b>
<b>FUCHS MULTICLEAN</b>	Well-proven, water-rinsible cleaner in spray cans for the degreasing of engines, etc. Rapidly dislodges oil residues.		
<b>Specialties – Oil binder</b>		<b>Specifications/ approvals</b>	<b>FUCHS recommendations</b>
<b>MAINTAIN ABSORPEX</b>	Oil Binder Type III R, Chemical Binder	Reported by Hygiene Institut Gelsenkirchen MPL	



# PLANTO RAPIDLY BIODEGRADABLE LUBRICANTS



PLANTO lubricants		Specifications/ approvals	FUCHS recommendations
<b>PLANTOMOT SAE 5W-40</b>	Rapidly biodegradable SAE 5W-40 engine oil. Perfect for vehicles powered by bio-diesel.		ACEA E3/ B3 API CG-4 KUBOTA SISU ZETOR
<b>PLANTO TWIN S</b>	Rapidly biodegradable, High Performance two-stroke engine oil for Autolube and Premix systems.	API TC JASO FC	NMMA-TC-W3
<b>PLANTOSYN 3268</b> 	Rapidly biodegradable, universal multigrade hydraulic oil based on fully saturated synthetic esters. Awarded the Blue Angel environmental seal.	ISO VG 32-68 ISO 15 380 HEES  FENDT KDM 28/2006 O&K BAUMASCHINEN	BOSCH REXROTH AG CASE MS 1230 CAT BF-1 KRAMER ALLRAD NH 636 BS PALFINGER TIMBERJACK VALMET
<b>PLANTOSYN 3268 ECO</b> 	Rapidly biodegradable, universal ester-based multigrade hydraulic oil. Awarded the Blue Angel environmental seal.	ISO VG 32-68 ISO 15 380 HEES	
<b>PLANTOHYD 40 N</b> 	Rapeseed oil-based hydraulic oil. Awarded the Blue Angel environmental seal.	ISO VG 32-68 ISO 15 380 HETG	
<b>PLANTO SPRÜHÖL S</b>	Corrosion preventive, penetrating oil.		

# PLANTO RAPIDLY BIODEGRADABLE LUBRICANTS



HIGH-TECH LUBRICANTS FOR MOTOR VEHICLES & MACHINERY

PLANTO lubricants		Specifications/ approvals	FUCHS recommendations
<b>PLANTOCORIT N</b>	Corrosion protection oil for bare metal surfaces.		
<b>PLANTO HYTRAC PLUS</b>	Special UTTO fluid for tractor gearboxes with or without wet brakes.	SAE 10W-30 SAE 80	Diverse makes of tractors
<b>PLANTOLUBE KS 32 K</b>	Rapeseed oil-based tacky lubricant for chains and other total-loss applications.		
<b>PLANTOGEL N</b>	Rapeseed oil-based, rapidly biodegradable general grease containing a calcium soap for total-loss applications, -20 °C to +70 °C.	ME 2 C-20 ISO-L-X-BAEA 2 Herrenknecht	
<b>PLANTOGEL 2 S</b>	Rapidly biodegradable EP grease based on synthetic esters for plain and roller bearings. Water resistant, easily pumpable in central lubrication systems, -40 °C to +120 °C.	KPE 2 K-40 ISO-L-X-DCEB 2 MAN 283 Li-P 2-B Bundeswehr GY 3095 SKF Lincoln RWE	DELIMON LINCOLN
<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 WILLY VOGEL VOLVO	
<b>PLANTOTAC N</b>	 Rapeseed oil-based, rapidly biodegradable chain saw oil. For professional use in chain saws. Excellent lubricity and good ageing stability. Awarded the Blue Angel environmental seal.		DOLMAR HUSQVARNA SOLO STIHL



The information contained in this product information is based on the experience and know-how of FUCHS EUROPE 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 EUROPE 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. With the publication of this product information, all previous editions cease to be valid.

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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-SERIES</b>	Zinc- and ash-free hydraulic and general lubricating oils with good oxidation resistance. Combat wear. Demulsifying. Fulfil and surpass HLP specs according to DIN 51524-2 and ISO 11158-HM.
<b>RENOLIN ZAF D-SERIES</b>	Zinc- and ash-free hydraulic and general lubricating oils with good oxidation resistance and corrosion protection. Excellent detergent and dispersant properties. Fulfil and surpass HLPD specs according to DIN 51524-2, ISO 11158-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 (Brugger: 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. Free of heavy metals. Good protection in boundary friction conditions. Good Brugger values (> 50 N/mm <sup>2</sup> ). HLPD hydraulic oils according to DIN 51524-2, ISO 11158-HM.
<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 deep 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 PG 32/46</b>	Fully-synthetic hydraulic and lubricating oils based on polyglycols with high VI's. Water-soluble. 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.
<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).



## 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</b>	Fire-resistant, Group HFC-E hydraulic oil based on water glycol. Water content less than 20%, high wear protection.
<b>RENOSAFE TURBO DR 46</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.

## 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 manufacturer.
<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.
<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.
<b>RENOLIN MORGEAR-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</b>	Special gear oil with state-of-the-art additive technology based on mineral oil and synergetic working additives. Excellent wear protection performance also under strong frictional stress. Surpasses the requirements of ISO 12925-1:CKC, CKD, CKE.
<b>RENOLIN HighGear Synth</b>	Special gear oil with state-of-the-art additive technology based on PAO. Excellent wear protection performance also under strong frictional stress. Surpasses the requirements of ISO 12925-1:CKC, CKD, CKE.



### Slideway oils

<b>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.
<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.
<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.

### Paper machine oils

<b>RENOLIN PA 220</b>	Paper machine oil, circulating and lubricating oil based on selected mineral oils for use in central lubricating systems in paper machines.
<b>RENOLIN UNISYN CLP 220 PA</b>	Fully synthetic, newly developed lubricating and circulating oil based on High Performance polyalpha-olefins which is 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 220 PA has a high oxidation stability, avoids the formation of sludge and has a high stability at high temperatures. The product can also be used as a gear oil CLP 220 HC according to DIN 51517, part 3.

### Maschinenöle

<b>AR-SERIES</b>	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.
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### Cylinder oils

<b>RENOLIN CH-SERIES</b>	High-quality, mineral oil-based cylinder oils. Good thermal stability and low coking. Exceed the requirements of Z lubricating oils according to DIN 51510.
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### Turbine oils

<b>RENOLIN ETERNA SERIES</b>	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. RENOLIN ETERNA 32, 46 and 68 are turbine oils according to DIN 51 515 part 1 and 2.
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### Transformer oil

<b>RENOLIN ELTEC</b>	Premium-quality, mineral oil-based insulating oil which can be used in transformers, converters and switching gear.
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### Tacky oils






<b>RENOTAC-SERIES</b>	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.)
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### Heat transfer oils

<b>RENOLIN THERM-SERIES</b>	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.
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## Environmentally friendly hydraulic and lubricating oils

<b>PLANTOHYD 40 N</b>  <small>PLANTOHYD 40 N</small>	Vegetable oil-based hydraulic fluid with additives to improve oxidation resistance and ageing stability. Rapidly biodegradable. Temperature range: -27 °C to +70 °C. Exceed ISO 15380 HETG specifications. VDMA 24 568 change-over recommendations should be observed.
<b>PLANTOHYD S-SERIES</b>  <small>PLANTOHYD 15 S / 22 S / 46 S</small>	Synthetic ester-based general lubricating and hydraulic oils. Temperature range: -35 °C to +90 °C. Rapidly biodegradable. Exceed ISO 15380 HEES. VDMA 24 569 change-over recommendations should be observed. Approved by BOSCH REXROTH (BRUENINGHAUS) and SAUER-SUNDSTRAND.
<b>PLANTOHYD S-NWG-SERIES</b>	Environmentally friendly hydraulic oils based on special, synthetic esters. The PLANTOHYD S-NWG series fulfil the requirements of ISO 15380 HEES and German legal requirements concerning non-water-polluting substances. VDMA 24 569 change-over recommendations should be observed.
<b>PLANTOLUBE POLAR S-SERIES</b>	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. VDMA 24 569 change-over recommendations should be observed.
<b>PLANTOSYN 46 HVI</b>  <small>PLANTOSYN 46 HVI</small>	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. VDMA 24 569 change-over recommendations should be observed.
<b>PLANTO ENVIRO HYD 46 S</b> 	Rapidly biodegradable, High Performance hydraulic fluid based on esters, non water-polluting fluid (according to German legislation), fulfils and surpasses the requirements according to ISO 15380: HEES 46, non-toxic, awarded the European Eco Label ("Euro Marguerite") according to the European Guideline 2005/360 EC.
<b>PLANTO ENVIRO HYD 46 HVI</b> 	Rapidly biodegradable, High Performance hydraulic fluid based on selected saturated esters, high thermal and oxidation stability, fulfils and surpasses the requirements according to ISO 15380: HEES 46, non-toxic, awarded the European Eco Label ("Euro Marguerite") according to the European Guideline 2005/360 EC.

## Environmentally friendly gear and general lubricating oils

<b>PLANTOGEAR S-SERIES</b>	Rapidly biodegradable and environmentally friendly, High Performance gear oils based on synthetic esters. Comply with DIN 51 517-3 CLP. Exceed ISO 15380 HEES. VDMA 24 569 change-over recommendations should be observed. Excellent protection against micro-pitting. Approved by well-known gear manufacturers.
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## Environmentally friendly slideway oils

<b>PLANTOLUBE CGLP 68/220 S</b>	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.
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## Environmentally friendly tacky oils

<b>PLANTOTAC HV-SERIES</b>	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.
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## Environmentally friendly mould-release oils

<b>PLANTO SCHALUNGSÖL N</b> 	Universal, vegetable oil-based mould-release oil. Rapidly biodegradable. Awarded the German „Blue Angel“ environmental seal.
<b>PLANTO SCHALUNGSÖL S</b> 	Universal, ester-based mould-release oil. Rapidly biodegradable. Awarded the German „Blue Angel“ environmental seal.





## Environmentally friendly compressor oil

<b>PLANTOLUBE SC 46 S</b>	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.
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## Compressor and general lubricating oils

<b>RENOLIN 200-SERIES</b>	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 VBVC lubricating oils according to DIN 51506.
<b>RENOLIN 500-SERIES</b>	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.
<b>RENOLIN DD-SERIES VDL</b>	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.
<b>RENOLIN SC-SERIES SC MC-SERIES</b>	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
<b>RENOLIN COOL +</b>	State-of-the-art High Performance screw compressor oil for difficult applications. Outstanding ageing stability and extremely long life.
<b>RENOLIN UNISYN OL-SERIES</b>	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.

## 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 MS-SERIES</b>	Semi-synthetic refrigeration oils. Mixtures of thermally stable alkylbenzenes and highly-refined naphthenic mineral oils (ISO VG 32–68). For use with R22 and R401A/B, R402A/B 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; also suitable for NH <sub>3</sub> .
<b>RENISO TRITON SE/SEZ-SERIES</b>	Fully-synthetic, ester-based refrigeration oils for polar, ozone-friendly refrigerants such as R134a, R404a, R507, R407c, R410a, 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 ULTRA COOL 68</b>	Full-synthetic refrigeration oil based on special base oil for NH <sub>3</sub> applications.





### Refrigeration oils

<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 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</b>	Refrigeration oil for the use in vehicle air-conditioning systems working with the refrigerant CO <sub>2</sub> . RENISO ACC 46 is based on a newly developed PAG base fluid and contains special additives which improve the ageing stability and the anti-wear performance. The refrigeration oil has a high thermal stability as well as a good CO <sub>2</sub> miscibility behaviour.

### Lubricants for the food an the pharma industry

<b>GERALYN SF-SERIES</b>	Special polyalphaolefines for applications in the food and the pharma industry. For casual, technical not avoidable contact with food. NSF-H1 approved.
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### Mineral oil-based greases for plain and roller bearings

<b>RENOLIT CA-SERIES</b>	Water-resistant, calcium-soap greases with and without tackiness improvers. Also available with graphite additives, NLGI grade 1 and 2.
<b>RENOCAL FN 745/94</b>	Lock mechanism and universal grease approved by VW (TL 745), BMW and MAN. Calcium soap grease, water-resistant. Good corrosion protection, -50 °C to +100 °C.
<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>	Special calcium complex soap 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 properties, NLGI 1/2, -20 °C up to +160 °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: WILLY VOGEL, BEKA-MAX and LINCOLN.
<b>RENOLIT LZR 000</b>	Semi-fluid grease for motor vehicle central lubrication systems. Gear grease for gearboxes in municipal machinery. Observe manufacturer's recommendations, -40 °C to +110 °C. Approved in line with MAN 283 Li-P 00/000 and MB 264.0. For central lubrication systems of: WILLY VOGEL, DEUTSCHE TECALEMIT and LINCOLN.
<b>RENOLIT H 443-HD 88</b>	Lithium soap-based EP grease with tackiness improvers. Resistant to weak acids and alkalis 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 FG 150</b>	Graphite grease for mechanically demanding applications specially if the bearings are subject to the ingress of water. Recommended for construction machinery. -30 °C to +120 °C.
<b>RENOLIT FLM-SERIES</b>	Lithium soap greases containing molybdenum disulphide (MoS <sub>2</sub> ) for highly stressed applications, NLGI 0 and 2, -20 °C to +140 °C.
<b>RENOLIT DURAPLEX-EP-SERIES</b>	All-round 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 284 Li-H 2, MB 265.1 and ZF TE-ML 12.
<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/RHF</b>	Ageing-resistant, thermally and mechanically stable, lithium soap greases based on polyalphaolefines. Good elastomer compatibility. -40/-50 °C to +140 °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, even up to +220 °C for short periods.
<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 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.
<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 x d <sub>m</sub> up to 1,4 million mm/min, NLGI 2, -40 °C up to +120 °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 LX-PG 2</b>	Polyglycol-based grease with a lithium complex thickener. Good elastomer compatibility (EPDM), good EP properties, suitable for low temperatures and resistant to cutting fluids. -40 °C to +160 °C. Approved by VW TL 52150.
<b>RENOLIT ST-V 2</b>	Special grease based on synthetic oil for life-time lubrication of sealed plain and roller bearings in a wide temperature range, -40°C to +160°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 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.



### Synthetic semi-fluid greases for plain and roller bearings

<b>RENOLIT LST-SERIES</b>	Semi-fluid greases, NLGI grade 0 and 00, based on polyglycols and a lithium thickener. Good elastomer compatibility (EPDM), good EP properties, suitable for low temperatures, -30 °C to +140 °C. Also available in NLGI 2.
<b>DISCOR R EP 000</b>	Special semi-fluid grease for gears and central lubrication systems at low temperatures, -60 °C to +100 °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 700-SERIES</b>	Electrically-insulating gel greases. Also suitable as a lubricating and assembly grease. -40 °C to +180 °C and even +200 °C for short periods.
<b>RENOLIT SI HVS</b>	Vacuum grease for vacuums up to 10 <sup>-8</sup> hPa.

### Special greases for plain and roller bearings

<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 CX-TOM 15</b>	Special calcium complex soap grease with outstanding low temperature characteristics. -40 °C to +160 °C.
<b>RENOLIT LX-OS 3</b>	Highly-adhesive, heavy-duty grease recommended for components subject to oscillating movements such as packing and washing machines. -30 °C to +140 °C.



### Rapidly biodegradable greases for plain and roller bearings

<b>PLANTOGEL N-SERIES</b>	Rapidly biodegradable, rapeseed oil-based calcium soap greases for total-loss and general greasing applications in, for example, water purification plants. NLGI grade 1 and 2, -20 °C to +70 °C.
<b>PLANTOGEL 2 S</b>	Rapidly biodegradable, synthetic ester-based EP grease for the lubrication of plain and roller bearings, water-resistant, -40 °C to +120 °C. Also available in spray cans as <b>PLANTO MULTISPRAY S</b> .
<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.

### 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 LX-WHITE 2</b>	Gear with complex soap-based greases, -30 °C to +160 °C.
<b>RENOLIT CHUCK PASTE</b>	White special paste to avoid fretting corrosion of threads and chucks, NLGI 2/3.
<b>RENOLIT WTF 2</b>	Synthetic low temperature grease for the lubrication of gear motors and plastic gears, NLGI 2, -60 °C up to +120 °C.
<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>DUOTAC ZGO-07</b>	Graphited, tacky grease for exposed gears, wire ropes, etc. Effectively combats wear. -20 °C to +120 °C.



The information contained in this product information is based on the experience and know-how of FUCHS EUROPE 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.

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## HIGH-TECH METAL WORKING FLUIDS



### Water-miscible, universam 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.
<b>ECOCOOL 2510 N</b>	Universal metal working fluid for the machining and grinding of steel and cast alloys.
<b>ECOCOOL 2030 MB</b>	Cutting fluid for the machining of steel, cast iron and aluminium. Can be used for roughing and grinding, MAPAL approved.
<b>ECOCOOL 3015 GS-W</b>	Specially formulated for soft water. Suitable for highly-alloyed aluminium, cast chrome-nickel alloys and stainless steels.

### Water-miscible cutting fluids specially for aluminium and high-alloy steels

<b>ECOCOOL TN 2525 HP</b>	Cutting fluid with EP additives, universally applicable from aluminium to stainless steel. MAPAL approved.
<b>ECOCOOL FC 3000</b>	Metal working fluid based on low-aromatic, hydrocracked oils. Universally applicable for steel and aluminium materials. MAPAL approved, boron-free.
<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 used in the aerospace industry.

### Water-miscible, biocide-free cutting fluids

<b>ECOCOOL FERROSTAR-SERIES</b>	Universal cutting fluid for the machining of steel and cast iron boron-free. The product's unique cleaning and flushing performance keeps machines clean, MAPAL approved.
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### Water-miscible cutting fluid specially for cast iron

<b>ECOCOOL GRINDSTAR</b>	Cutting fluid with a large buffer capacity. Specially formulated for grey cast iron and all common steels. Optimised cleaning and flushing performance. Economical consumption.
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### Water-miscible, pH-natural 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 used in the aerospace industry. MAPAL approved, boron-free.
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### Water-miscible cutting fluid specially for magnesium

<b>ECOCOOL 2516 MG</b>	High-quality cutting fluid. Also suitable for aluminium and steel. Boron-free.
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### 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.
<b>ECOCOOL 2520</b>	High alloyed, universal cutting fluid for the machining of aluminium alloys, steel and nonferrous metals.



**Water-miscible, synthetic cutting fluids**

<b>ECOCOOL S-HL</b>	Fully-synthetic cutting fluid, boron-free, for the machining and grinding of steel and cast iron.
<b>ECOCOOL S 67 NA</b>	Fully-synthetic cutting fluid for the honing and grinding of steel and cast iron.
<b>ECOCOOL S 69 CF</b>	EP cutting fluid, boron-free, specially for the grinding of steel. Also suitable for sintered metals.

**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.
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**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).
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**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.

**Neat, chlorine-free cutting oils**

<b>ECOCUT 500-SERIES</b>	Thread-cutting oils with good EP performance. Suitable for all materials.
<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.



### 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 hole honing.
<b>ECOCUT HO 74</b>	Universal lapping oil for all materials and all common lapping powders.
<b>ECOCUT FE/1520</b>	Spark erosion oils. Universally suitable for roughing and precision passes. Neutral odour and free of aromatics.

### Environmentally friendly, neat cutting oils

<b>UNIFLUID 10</b> <b>UNIFLUID 32</b>	Rapidly biodegradable, ester-based cutting oils. Multifunctional application in machine tools at cutting and hydraulic oils. Non-water-polluting (see applicable Material Safety Data Sheet). Suitable for all materials.
<b>PLANTOCUT SR-SERIES</b>	Rapidly biodegradable, ester-based cutting oils with low water pollution category. 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.
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### 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.
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### Hardening oils / quenchant concentrates

<b>THERMISOL QB-SERIES</b>	Bright quenching oils.
<b>THERMISOL QH-SERIES</b>	High Performance quenchants and High Performance hardening oils.
<b>THERMISOL QW-SERIES</b>	Hot oil quenchants and annealing oils.
<b>THERMISOL QHY-SERIES</b>	Synthetic, High Performance quenching and hardening oils.
<b>THERMISOL QZS-SERIES</b>	Water-miscible quenching fluids.



## Neat forming lubricants

<b>RENOFORM UBO-SERIES, FO, FSB LVO-SERIES</b>	Residue-free stamping and calibration oils. Volatile at room temperatures. VOC-free formulations.
<b>RENOFORM MBO-SERIES, FW</b>	Drawing compounds with polar additives and good corrosion protection for all materials.
<b>RENOFORM MBO 369/2, 319 NAT, EMO 4013</b>	Cold extrusion oils containing polar components and EP-additives.
<b>RENOFORM MBO 369 UNI, EYO 5001</b>	Cold extrusion- and slideway-oils as a multifunctional oil.
<b>RENOFORM MZAN-, HBO-SERIES</b>	Stamping and fine blanking oils. Also for tube drawing. Some products contain chlorine.
<b>RENOFORM HAO-, MBO-SERIES</b>	Mineral oil-free drawing compounds. Components can be processed without prior degreasing.
<b>RENOFORM ALUROL</b>	Additive concentrate for the rolling of aluminium.
<b>RENOFORM WO-SERIES</b>	Blankwalzöle für alle Anwendungen.
<b>RENOFORM WO 52 B</b>	Rolling oil. Final-finishing oil. Excellent corrosion protection.
<b>RENOFORM MBO 2907 V 250 MBO 2907 HV MF 2755 PLANTOFORM MBO 2907</b>	Internal high pressure metal forming lubricants.

## Water-miscible forming lubricants

<b>RENOFORM MCU- SERIES</b>	Drawing oils. Emulsifiable. For copper wire.
<b>RENOFORM MBW- SERIES</b>	Drawing oils. Emulsifiable. For the deep drawing of steel.
<b>RENOFORM WN, KM</b>	Emulsifiable cold rolling oils suitable for steel and non-ferrous metals.
<b>RENOFORM MBO 2755 SD</b>	Hydroforming fluid.

## Pasty forming lubricants

<b>RENOFORM MF, MCP MULTI-SERIES</b>	Water-miscible, pasty drawing compounds.
<b>RENOFORM SB 2</b>	Drawing compound for steel wire.
<b>RENOFORM HAP 801/6, HBT 581/3, HAO 409</b>	Drawing compounds containing solid lubricants and/or EP additives.
<b>RENOFORM BTA</b>	Drawing compounds for steel wire.
<b>RENOFORM HBX 60</b>	Hotmelt dry film for heavy-to-draw parts.



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# CLEANER FOR THE INDUSTRY



## Water-based, alkaline dip cleaner

<b>RENOCLEAN SPECIAL 2000</b>	Medium alkalinity, universal cleaner for components, flooring, etc.
<b>RENOCLEAN VR 1798/2</b>	Medium alkalinity, universal cleaner for steel and aluminium. Also suitable for ultrasonic baths and floor cleaning.
<b>RENOCLEAN VR 1862</b>	Low alkalinity, for all materials.

## Water-based, alkaline spray cleaner

<b>RENOCLEAN VR 1712/2</b>	High alkalinity. Suitable for temperatures between +45 °C and +60 °C.
<b>RENOCLEAN VR 1021</b>	Medium alkalinity. Suitable for temperatures between +35 °C and +60 °C.
<b>PRENOCLEAN VR 1021 DGI</b>	Medium alkalinity. Strong demulsifying cleaner for steel and aluminium.
<b>RENOCLEAN VR 1021 CXV</b>	Medium alkalinity. For steel, aluminium and other nonferrous metals. Suitable for high-pressure deburring.

## Cold cleaner (solvent cleaner)

<b>RENOCLEAN UWF</b>	Free of aromatics, environmentally friendly cold cleaner.
<b>RENOCLEAN KU</b>	Synthetic solvent cleaner for the engineering and the electrical industries.
<b>RENOCLEAN KAF</b>	Aromatic-free cleaner for solvent cleaning machines.
<b>RENOCLEAN KLV</b>	VOC-free solvent cleaner.

## Cold cleaner, rapidly biodegradable

<b>PLANTOCLEAN VR 2882</b>	Ester-based cleaner for all metals.
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## Other specialties

<b>RENOCLEAN VR 2840</b>	Synthetic tube welding emulsion.
<b>RENOCLEAN 1895</b>	Reflux fluid for induction hardening lines.
<b>RENOCLEAN SMC</b>	System cleaner for water-miscible cutting fluids.
<b>RENOCLEAN 431</b>	Sliding lubricant for the fitting of rubber and plastic components.
<b>RENOCLEAN MEDI-RANGE</b>	Cleaners for the Medical Sector.
<b>RENOCLEAN HAND PROTECT-, HAND WASH- AND CARE-PRODUKTE</b>	Optimally matched skin protection, skin cleansing and skin care products.
<b>RENOCLEAN ENTFETTER 39</b>	High alkaline builder for modular aqueous cleaning systems.

# CORROSION PREVENTIVES FOR THE INDUSTRY



## Other specialties

<b>RENOCLEAN TENSID 161</b>	Emulsifying surfactant for aqueous cleaning systems.
<b>RENOCLEAN VR 1500</b>	Demulsifying surfactant for aqueous cleaning systems.

## Corrosion protection oils

<b>ANTICORIT 1, 3, 5 F</b>	Conventional corrosion protection oils for universal use.
<b>ANTICORIT 5012 S / RP 30NT</b>	Conventional corrosion protection oils for steel coil 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. VDA approved.

## 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 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 DF-SERIES</b>	Dewatering fluids for very rapid water displacement. Form thin, highly effective, oily, waxy or lacquer-like corrosion protection films. Also available without film-forming agents for absolutely stain-free drying. Oily, greasy and wax-like films are available.
<b>ANTICORIT DF-400-SERIES</b>	VOC-free formulations. Comply with German solvent emission regulations at +20° C; free of barium.

## 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 semi-finished 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.
<b>ANTICORIT WOK-SERIES</b>	Meta-stable, corrosion protection emulsions for the interim and long-term protection of bare metal surfaces. These products also act as forming lubricants.



## CORROSION PREVENTIVES FOR THE INDUSTRY



### Vapor phase corrosion protection (VCI)

<b>ANTICORIT VCI UNI P-SERIES</b>	VCI papers, perfect for wrapping or covering metal or metal-combination parts, available in different dimensions and details. Also available with outer PE-coating. The products can be printed with the customer's logo, etc.
<b>ANTICORIT VCI UNI S-SERIES</b>	VCI powder, packed into permeable paper bags which are simply placed inside the packaging. Suitable for all kinds of metal and metal-combinations.
<b>ANTICORIT VCI UNI G-SERIES</b>	VCI granulate, packed into microperforated PE-bags which are simply placed inside the packaging. Suitable for all 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 all kinds of metal and metal-combinations.
<b>ANTICORIT VCI UNI F-SERIES</b>	VCI foams, available in different packaging sizes and details, e.g. as VCI pad for the corrosion protections in tool-boxes, switch cabinets, control panels and electronics. Also available as foam roll: ideal when an additional mechanical protection is needed. Suitable for all kinds of metal and metal-combinations.
<b>ANTICORIT VCI UNI FI-SERIES</b>	VCI films, comprehensive range available with different packaging sizes and details. The products can be printed with the customer's logo, etc. Also available as VCI bags, e.g. as standard bags for Euro pallets. Suitable for all kinds of metal and metal-combinations.
<b>ANTICORIT VCI UNI O-SERIES</b>	Mineral oil with VCI properties. Suitable for all 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. The solution dries without any traces. Suitable for all 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 all kinds of metal and metal-combinations.

### Special corrosion preventives

<b>ANTICORIT OHW 360</b>	Blue, thixotropic corrosion preventive specially designed for the protection of coil and stack edges.
<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.
<b>ANTICORIT TX 8R, DW THIX R2</b>	Optimum chain protection with excellent wear protection when components are first used. Compatible with all common subsequently-applied lubricants.
<b>ANTICORIT DFG</b>	Penetrating oil spray with solid lubricants.
<b>ANTICORIT LBO-REIHE</b>	Optimum chain protection with excellent wear protection when components are first used. Compatible with all common subsequently-applied lubricants. Also recommended for conveyor belt chains.
<b>ANTICORIT SPO 4</b>	Skin-pass fluid.
<b>ANTICORIT BGI</b>	High Performance corrosion prevention oil containing VCI. Offers reliable long-term corrosion protection for bearings, gearboxes, etc.
<b>ANTICORIT BW, HKW 350M</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 BW COLOR</b>	Corrosion protection system for long-term applications in extreme conditions such as those encountered in the offshore and maritime sectors.
<b>ANTICORIT BML 3</b>	Mineral oil-free corrosion preventive for brake components and systems. Compatible with brake fluids.

### Process oils

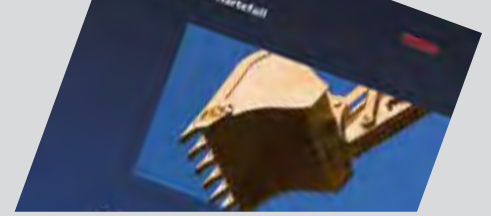
<b>W-SERIE</b>	White oils for pharmaceutical and cosmetic applications. Odourless and tasteless. White oils according to DAB 10 and Ph.Eur. and white oils for technical applications.
<b>V-SERIE</b>	Vaselines for pharmaceutical and cosmetic applications. Vaselines according to DAB 10 and Ph.Eur. and vaselines for technical applications.

### Corrosion protection concentrates

<b>ANTICORIT OHK-SERIES</b>	Corrosion protection concentrates and ready-to-use mixtures in white spirit, isoparaffins and oils for the protection of all metals. Excellent fingerprint remover properties. Suitable for the corrosion prevention in industrial washing machines.
<b>ANTICORIT 04-SERIES</b>	Barium-free corrosion protection concentrates with outstanding corrosion protection properties for a lot of applications, especially for the bearing industry.

### Solvent products

<b>ANTICORIT A-SERIES</b>	Low-aromatic solvents and thinners for ANTICORIT products. Also available in VOC-free versions.
<b>ANTICORIT B-SERIES</b>	Aromatic-containing solvents and thinners for ANTICORIT products.
<b>ANTICORIT 1449 IP</b>	Isoparaffin solvent and thinner for ANTICORIT products.



Brochure  
BMW



Brochure  
DAF



Brochure  
MAN



Brochure  
Mercedes-Benz  
(passenger cars)



Brochure  
Mercedes-Benz  
(commercial vehicles)



Brochure  
RENAULT



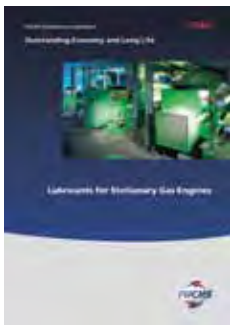
Brochure  
SCANIA



Brochure  
VOLVO



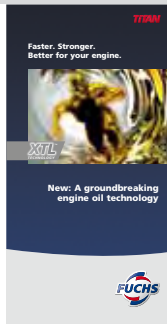
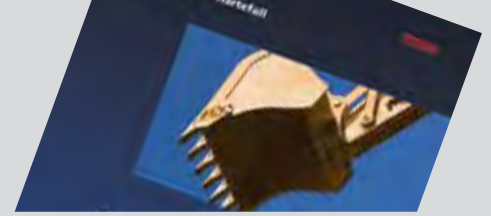
Brochure  
VW



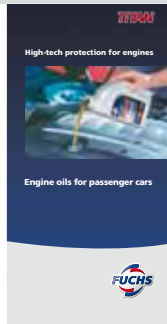
Brochure  
Gas engine oils



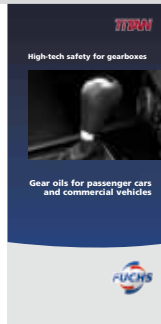
Brochure  
PLANTO ENVIRO



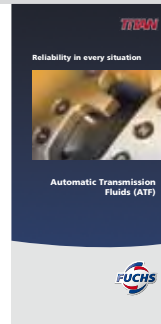
Flyer  
TITAN XTL



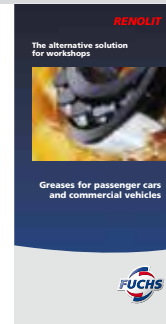
Flyer  
Motor oils



Flyer  
Gear oils



Flyer  
Automatic  
transmission fluids



Flyer  
Greases



Broschüre  
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Flyer  
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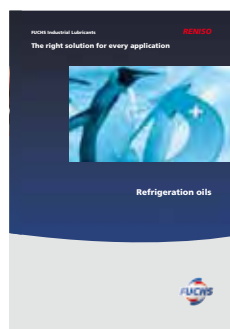
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