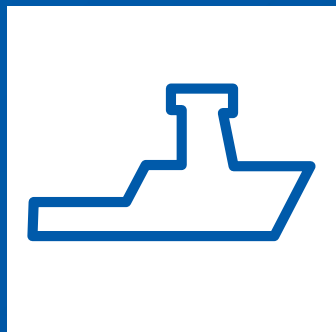




Product programme **Marine**

MOVING YOUR WORLD



LUBRICANT FOR MARINE APPLICATIONS

The ocean is a vulnerable environment. Shipping companies and others with the sea as their workplace are under increasing pressure in the form of ever stricter environmental legislation. At FUCHS, we have long had a close working relationship with manufacturers and the shipbuilding industry, and we know the conditions under which they work. This enables us to offer a complete range of lubricant products for our markets that both fulfil the demanding specifications of the shipping industry and meet the most stringent environmental requirements in the Nordic and Baltic Sea regions.

We always use quality raw materials and our entire business is certified in accordance with the environmental and quality standards ISO 9001:2015 and ISO 14001:2015. Our customers can always feel safe in the knowledge that we deliver what we promise.

On the following pages, we present our products that are specially adapted for marine operations.



Reduced wear and tear

Extreme pressure

Environmentally adapted

High temperature



Corrosion protectionLow temperature

Food grade approved

Process compatible

EU ECO label



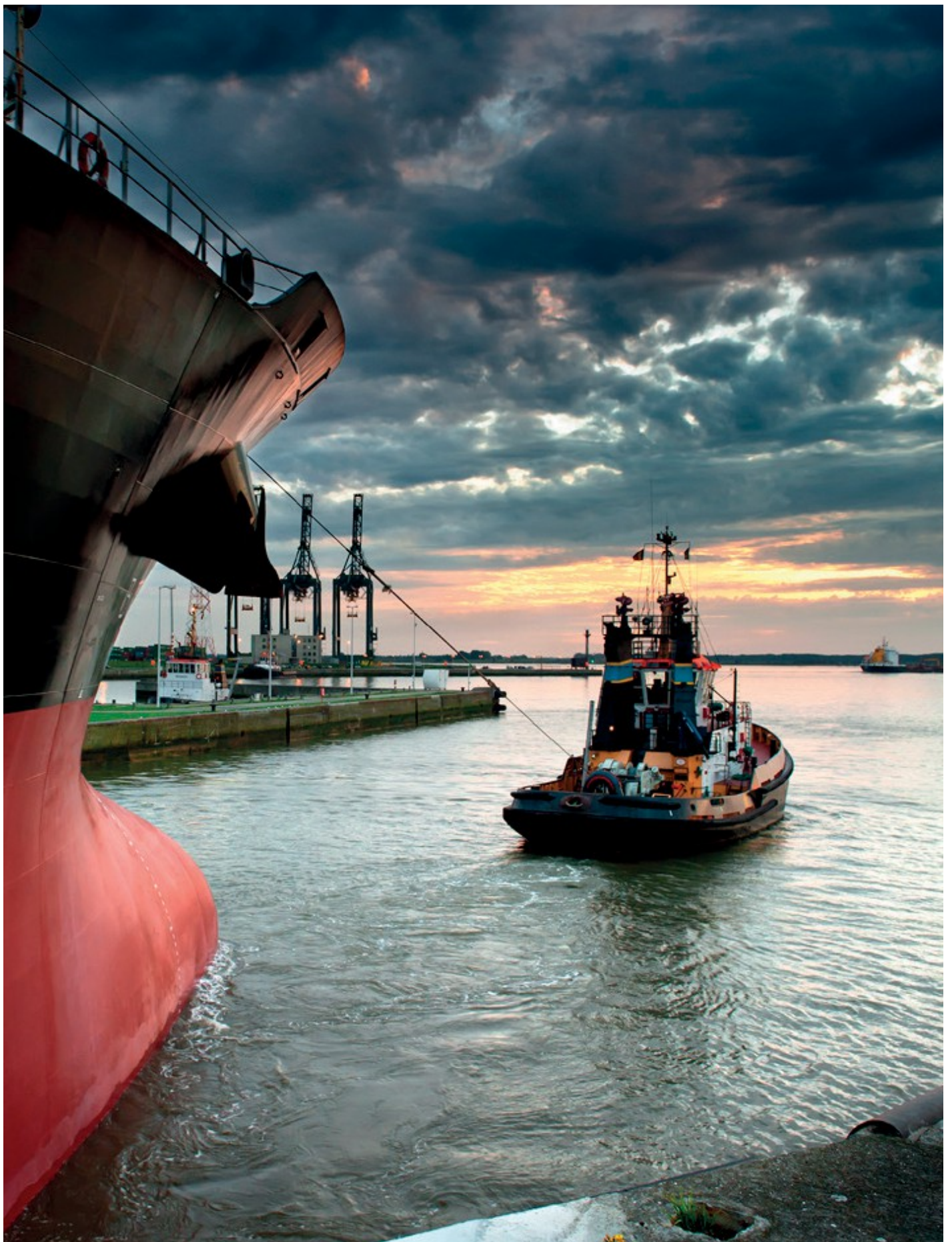
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For the latest specifications and approvals, see product data sheet.

Engine oil

Product name	Description	Specification	Authorisations	FUCHS recommends
Marine engine oil				
TITAN MARWAY 1030 SAE 30	Ultra High Performance marine diesel engine oil for high and medium speed engines using low sulphur fuels.	SAE J300: SAE 30	MAN B&W ALPHA MODULE GEAR MAN DIESEL WÄRTSILÄ	API CF MIL-L-2104D
TITAN MARWAY 1040 SAE 40	Ultra High Performance marine diesel engine oil for high and medium speed engines using low sulphur fuels.	SAE J300: SAE 40	MAN DIESEL & TURBO ROLLS-ROYCE BERGEN WÄRTSILÄ	API CF MIL-L-2104 D
TITAN MARWAY 1530 SAE 30	Super High Performance high-performance engine oil with higher TBN for use where fuels with higher sulphur content are used. The product counteracts soot and deposits and effectively protects against corrosion.	SAE J300: SAE 30	-	MAN B&W Wärtsilä Ulstein Bergen API CD MIL-L-2104C
TITAN MARWAY 1540 SAE 40	Super High Performance high-performance engine oil with higher TBN for use where fuels with higher sulphur content are used. The product counteracts soot and deposits and effectively protects against corrosion.	SAE J300: SAE 40	-	API CD MIL-L-2104 C
TITAN MARWAY 2530 SAE 30	Super High Performance high-performance engine oil with higher TBN for use where fuels with higher sulphur content are used. The product counteracts soot and deposits and effectively protects against corrosion.	SAE J300: SAE 30	-	MAN B&W Wärtsilä Sulzer
TITAN MARWAY DD SAE 40	Super High Performance 2-stroke diesel engine oil. Has excellent cleaning properties that keep valves and pistons free of deposits.	SAE J300: SAE 40	-	API CF-2 (DETROIT 2-T DIESEL)
Engine oil for outboard engines				
TITAN MARINE TC-W3	Ultra High Performance 2-stroke marine engine oil for outboard engines with or without direct injection. Meets the latest requirements and is approved in accordance with NMMA.	-	NMMA TC-W3	BOMBARDIER EVINRUDE JOHNSON KAWASAKI MARINER MERCURY SEADOO SUZUKI TOHATSU YAMAHA
TITAN MARINE FC-W SAE 10W-30	Ultra High Performance boat engine oil for 4-stroke petrol engines. Meets the latest requirements and is approved according to NMMA.	-	NMMA FC-W (CAT)	BOMBARDIER EVINRUDE HONDA JOHNSON MERCURY SEADOO SUZUKI YAMAHA
Motor oil for marine and stationary gas engines				
TITAN GANYMET PRO RR	Ultra High Performance engine oil for gas engines with or without Lean Burn technology. Excellent lubrication properties creates and keeps the engine free of soot and deposits. Pro-The duct has a low ash content and is well-suited for application emissions that run on natural gas.	-	ROLLS-ROYCE MOUNTAINS BV-G, CR-G, K-G1, -G2, -G3	-

Product name	Description	Specification	Authorisations	FUCHS recommends
Diesel engine oil				
TITAN CARGO MAXX SAE 10W-40 	Premium MAXX Performance extremely fuel-efficient engine oil based on new XTL technology. Specially developed for modern vehicles with turbo and exhaust gas aftertreatment system. Good cold start properties and oxidation stability ensure fuel savings over the entire oil change interval.	ACEA E9/E7/E6/E4 API CJ-4 CAT ECF-3 JASO DH-2	DEUTZ DQC IV-10 LA (incl. TTCD) MACK EO-O PREMIUM PLUS MAN M 3271-1 MAN M 3477 MAN M 3575 MB-APPROVAL 228.31 MB-APPROVAL 228.51 MTU DDC TYPE 2.1 MTU DDC TYPE 3.1 RENAULT RLD-3 SCANIA LA VOLVO VDS-4	CUMMINS CES 20081 DETROIT DIESEL 93K218 IVECO 18-1804 CLASSE TLS E9 IVECO 18-1809 CLASS NG2 VOITH RETARDER "B"
TITAN TRUCK PLUS SAE 15W-40	Ultra High Performance engine oil. Especially for heavily loaded diesel engines in commercial vehicles. Lower oil consumption.	ACEA E7 API CI-4/SL GLOBAL DHD-1 CAT ECF-1-a/ECF-2	CUMMINS CES 20076/7/8 DETROIT DIESEL 93K215 DEUTZ DQC III-18 MACK EO-N MB-APPROVAL 228.3 MTU DDC TYPE 2 RENAULT RLD/RLD-2 VOLVO VDS-3	ALLISON C-4 CAT TO-2 CASE MS 1121 CUMMINS CES 20071/2 IVECO 18-1804 CLASS T2 E7 MAN M 3275-1 NH 330H
TITAN CARGO LD3 SAE 10W-40	Premium Performance engine oil with good fuel economy for use in Scania Euro 6 vehicles. Specially developed for extended service intervals.	ACEA E7/E4	MACK EO-N MAN M 3277 MB-APPROVAL 228.5 RENAULT RLD-2 SCANIA LDF-3 VOLVO VDS-3	API CF SCANIA LDF-2
Monograde motor oil				
TITAN UNIVERSAL HD SAE 30	High performance monograde oils for petrol and diesel engines. Also suitable for use as transmission oil in construction machinery, but can also be used in other machines, depending on the manufacturer's specifications.	-	DEUTZ DQC I-02 MTU DDC TYPE 2 ZF TE-ML 04B (ZF001189)	ACEA E2 API CF-4/SG MIL-L-2104 D ALLISON C-4 CAT TO-2 MAN 270 MB 228.2 ZF TE-ML 02C
TITAN UNIVERSAL HD SAE 40	High performance monograde oils for petrol and diesel engines. Also suitable for use as transmission oil in construction machinery, but can also be used in other machines, depending on the manufacturer's specifications.	-	DEUTZ DQC I-02 MB-APPROVAL 228.2 MB-APPROVAL 235.12 MTU DDC TYPE 2 ZF TE-ML 04B (ZF001190)	ACEA E2 API CF-2/CF-4/SG MIL-L-2104 D ALLISON C-4 CAT TO-2 MAN 270 ZF TE-ML 02C
Motor oil for petrol and light diesel engines				
TITAN GT1 FLEX 23 SAE 5W-30	Premium Performance extremely fuel-efficient engine oil with optimal cold-start properties and unrivalled performance reserves. For modern cars and vans with or without extended service intervals. Specially developed for BMW, VW and Mercedes Benz cars with exhaust cleaning and turbocharging.	ACEA C2/C3 API SN	BMW LONGLIFE-04 MB-APPROVAL 229.31 MB-APPROVAL 229.51 MB-APPROVAL 229.52 VW 505 00/505 01	CHRYSLER MS-11106 FIAT 9.55535-S1 / -S3 GM-LL-A-025 GM-LL-B-025 IVECO 18-1811 CLASS SC1
TITAN Supersyn LONGLIFE SAE 5W-40	Ultra High Performance, fuel-saving engine oil for a range of vehicles with or without extended service intervals.	ACEA A3/B4 API SN	BMW LONGLIFE-01 MB-APPROVAL 226.5 MB-APPROVAL 229.5 PORSCHE A40 PSA B71 2296 RENAULT RN0700/ RN0710 VW 502 00/505 00	-



Propeller shaft oil

Product name	Description	Specification	Authorisations	FUCHS recommends
Propeller shaft oil				
STERNWAY 220	Propeller sleeve oil that counteracts corrosion and protects bearings and seals against wear. Maintains its good protective properties when mixed with water.	-	HEIMDAL PROPULSION SIMPLEX THYSSSEN KUPP	-
STERNWAY 460	Propeller sleeve oil that counteracts corrosion and protects bearings and seals against wear. Maintains its good protective properties when mixed with water. Can be used as a thickener for thinner oil in the event of seal leakage.	-	HEIMDAL PROPULSION SIMPLEX THYSSSEN KUPP	
STERNWAY BIO 100 	A biodegradable oil for propeller shaft sleeves and propeller hubs. The product is formulated to provide the best possible protection against wear and corrosion, while being environmentally friendly. It can also be used with advantage in gearboxes. Complies with: Salt Water "Rust B", 80 % > OECD 301B.	-	SIMPLEX THYSSSEN KUPP WÄRTSILA DEAP SEA SEALS CEDERWALL & SÖNER AB	-

Girolje

Product name	Description	Specification	Authorisations	FUCHS recommends
Marine girolje				
TITAN MARINE GEAR SAE 80W-90	High performance transmission oil for gearboxes in stern drives and propeller shafts. Also suitable for gears/drives and transmissions in agricultural and leisure equipment.	API GL-4	-	-
LOADWAY MARINE 68	Gear oil for most types of marine gearboxes with operating temperatures up to 80°C. Tested and approved for heavily loaded gears and seals. Very good water separation and filtration properties.	DIN 51517-CLP DIN 51534 FZG>12 ISO-L-CKC ISO 6743-6	ROLLS-ROYCE RAUMA REPULA BRUNVOLL SIMPLEX THYSSSEN KUPP	-
LOADWAY MARINE 100			ROLLS-ROYCE RAUMA REPULA SIMPLEX THYSSSEN COUP	
LOADWAY MARINE 150			ROLLS-ROYCE RAUMA REPULA ROLLS-ROYCE ULSTEIN SIMPLEX THYSSSEN KUPP	
LOADWAY MARINE 220			ROLLS-ROYCE RAUMA REPULA ROLLS-ROYCE ULSTEIN	

Gears and circulating oil

Product name	Description	Viscosity 40 °C mm /s ²	Viscosity 100 °C mm /s ²	VI	Floating point °C	Flame point COC °C	Standards and tests
Gears and circulating oil							
RENOLIN UNISYN XT 68 	Fully synthetic industrial gear oil based on newly developed polyalphaolefin (PAO) oils with a very high, natural, shear-stable viscosity index and excellent low temperature properties. Exceptional wear protection, high resistance to micropitting and optimal rust protection. Recognised by leading gearbox manufacturers. 220 and 320 are also recommended for wind power applications.	68	11	154	-54	238	DIN 51517-3 CLP. ISO 6743-6, ISO 12925-1: CKC/ CKD/ CKE/ CKSMP. AGMA 9005/E02: EP. AIST 224. Flender BA 7300 Table A.
RENOLIN UNISYN XT 100 		100	15,3	162	-48	238	
RENOLIN UNISYN XT 150 		150	21,4	168	-45	238	
RENOLIN UNISYN XT 220 		220	29,4	174	-42	242	
RENOLIN UNISYN XT 320 		320	40,2	179	-42	242	
RENOLIN UNISYN XT 460 		460	54,5	188	-39	242	
RENOLIN UNISYN XT 680 		680	75,5	192	-39	244	
RENOLIN UNISYN XT 1000 		1000	101	195	-33	244	
RENOLIN CLP 68 	High-quality mineral oil-based gear oil with very good EP and load-bearing properties.	68	8,7	99	-24	236	DIN 51517: CLP, ISO 12925-1 and ISO 6743-6: CKC, CKD AIST 224, AGMA 9005/E02: EP. Fulfil the requirement in David Brown S1.53.101. Approved by leading gear manufacturers, such as Flender GmbH (Flender BA7300, table A), Müller Weingarten AG (DT 55 005, 10/2003).
RENOLIN CLP 100		100	11,2	98	-21	240	
RENOLIN CLP 150		150	14,5	96	-24	250	
RENOLIN CLP 220		220	18,9	96	-24	260	
RENOLIN CLP 320		320	24	95	-12	255	
RENOLIN CLP 460		460	30,4	95	-12	270	
RENOLIN CLP 680	Environmentally adapted, industrial gearbox oil based on synthetic, saturated ester. Excellent anti-wear and anti-corrosion properties. Recommended for lubrication of gears, bevel, planetary and worm gears, especially in environmentally sensitive areas.	680	36,8	88	-21	270	DIN 51517-3: CLP, ISO 12925-1 CKC/CKD/CKE, AGMA 9005/E02:EP. EU Ecolabel (EEL) DE/027/177. HOCNF-registered (NEMS).
PLANTOGEAR 100 HVI 		100	-	138	-33	>270	
PLANTOGEAR 150 HVI 		150	-	145	-30	>270	

Hydraulic oil

Product name	Description	Density 15 °C kg/m ³	Viscosity 40 °C mm /s ²	Viscosity 100 °C mm /s ²	VI	Floatin g point °C	Flame point COC °C	Standards and tests
Hydraulic oil for outdoor use								
RENOLIN ZAF HVXA 15	Zinc-free hydraulic oils designed for use in hydraulics operating under very demanding conditions. Modern hydraulic systems place high demands on hydraulic oil. The products fulfil user requirements for a qualified hydraulic oil for advanced hydraulics that works outdoors under varying temperature conditions. Filter-related problems are avoided and operational reliability is good.	853	14,8	3,7	142	-51	184	DIN 51524-3: HVLP, ISO 6743-4: L-HV. HOCNF-registered (NEMS).
RENOLIN ZAF HVXA 22		860	20,3	4,7	158	-45	192	DIN 51524-3: HVLP, ISO 6743-4: L-HV, SS 155434. HOCNF-registered (NEMS).
RENOLIN ZAF HVXA 32		864	30,8	6,5	173	-51	192	DIN 51524-3: HVLP, ISO 6743-4: L-HV.
RENOLIN ZAF HVXA 46		869	45	8,0	157	-48	182	HOCNF-registered (NEMS).
RENOLIN ZAF HVXA 68		875	65,5	11,1	165	-45	188	Approved according to BOSCH- REXROTH RE 90220.
RENOLIN ZAF HVXA 100		883	106	14,3	138	-33	222	DIN 51524-3: HVLP, ISO 6743-4: L-HV. HOCNF-registered (NEMS).



Hydraulic oil

Product name	Description	Density 15 °C kg/m ³	Viscosity 40 °C mm /s ²	Viscosity 100 °C mm /s ²	VI	Floatin g point °C	Flame point COC °C	Standards and tests
Environmentally adapted hydraulic oil								
PLANTOSYN SE 32 HP 	High-performance, long-life hydraulic oils based on saturated esters. The products are environmentally adapted and developed for demanding hydraulic systems, both indoors and outdoors.	934	31,5	6,2	152	<-63	250	ISO 15380: HEES, SS 155434 AAV 32 Environmentally Acceptable. Tested according to. Vickers V-104C, RPVOT: > 950 min. HOCNF-registered (NEMS).
PLANTOSYN SE 46 HP 	The product has both superior oxidation resistance and high hydrolysis stability.	923	45	7,95	148	<-60	244	ISO 15380: HEES, SS 155434 AAV 46 Environmentally Acceptable. Tested according to. Vickers V-104-C, dry TOST: >8000 hr. HOCNF-registered (NEMS). Meets the requirements of Bosch Rex- roth RE 90221.
PLANTOFLUID SE 32-68 	Environmentally adapted hydraulic oil for systems operating in a very wide temperature range (-30°C) up to + 85 °C) and there a viscosity class VG 32, 46 or 68 is recommended. The product is based on a biodegradable synthetic ester. The product has very high technical performance, good oxidation stability, is extremely shear stable and has an exceptionally fast air separation.	916	36	7,4	190	-40	310	ISO 15380: HEES, SS 155434 BBV 32 Environmentally Acceptable. Tested according to Vickers 35VQ25A and CEC-L-45-A-99, 20h: 1,3%. Approved by Sauer Danfoss, Ponsse.
PLANTOHYD SE 32 	Environmentally adapted hydraulic oils developed for hydraulic systems that are in operation all year round under varying conditions.	895	30,1	6,56	182	-42	200	ISO 15380: HEES, SS 155434 BBV 32 Environmentally Acceptable. Tested according to Vickers V-104-C.
PLANTOHYD SEE 46 	The products are based on a biodegradable synthetic ester and are very shear stable.	921	46	9,25	190	-42	290	ISO 15380: HEES, SS 155434 BBV 46 Environmentally Acceptable. Tested according to Vickers V-104-C. Authorised by Sauer Danfoss. Meets the requirements of Bosch Rex- roth RE 90221.
Rivolta N.B.A. 75 	Fully synthetic hydraulic oil. Environmentally adapted and food approved. Recommended in, for example, combine harvesters, equipment for shipping or loading and handling in harbours.	920	49	9,7	187	-50	>200	NSF H1. The base oil is biological degradable >60% in accordance with OECD 301 B.

Lubricating grease



Product name	Description	NLGI	Base oil viscosity at 40 °C mm /s ²	Thickening agent	Base oil	Temperature range °C	Standards and tests
Lubricating grease							
RENOLIT GREASEWAY CAH 92	High quality, anhydrous, calcium thickened grease with good water resistance, designed for heavily loaded sliding and rolling bearings. Recommended for lubrication of chassis, construction, agricultural and forestry machinery, water pumps, etc.	2	1370	CaH	M	-30 / +120, max 130	DIN 51502: KP2K-30. ISO 6743: L-XC(F)CIB2.
RENOLIT UNIWAY LIX 42	High-quality lubricating grease based on mineral oil, thickened with lithium complex soap. Specially developed and optimised for electric motors and other rotating equipment in the industry. Works very well for both small, lightly loaded and large, heavily loaded rolling bearings, depending on speed and temperature.	2	110	LiX	M	-30 / +140, max 220	DIN 51502: KP2N-30. ISO 6743-9: L-XCDHB2.
RENOLIT UNIWAY LIX 42 PA 	Optimal performance grease based on fully synthetic base oils and thickened with lithium complex soap. Suitable for both small, lightly loaded and larger, heavily loaded sliding and rolling bearings and for vibrating applications. The product can withstand corrosive environments and works well in extreme cold. Suitable as a universal grease in industries where large temperature variations occur.	2	100	LiX	S	-40 / +150, max 220	DIN 51502: KPHC2N-40. ISO 6743-9: L-XDDIB2.
RENOLIT UNIWAY LIX 62	Lubricating grease thickened with lithium complex, based on mineral oil. Functions as a universal grease and is suitable for bearing lubrication in both industrial and vehicle applications.	2	210	LiX	M	-30 - +150, max 180	DIN 51502: KP2N-30. ISO 6743: L-XCDIB2. Volvo standard 1277.2. NLGI standard GC-LB.

Thickener legend ALX = Aluminium complex | Ca = Calcium | CaH = Calcium, anhydrous | CaX = Calcium complex | CaSX = Calcium sulfonate complex | Li = Lithium |

LiCa = Lithium calcium | LiCaX = Lithium calcium complex | LiPX = Lithium polyethylene complex | LiX = Lithium complex | O = Inorganic | PT = Polymer | PTFE = Polytetrafluoroethylene (NB! Cannot be mixed with other greases) | PU = Polyurea | Synth. NaX = Synthetic sodium complex

Base oil legend M = Mineral | MV = Mineral white oil | PAG = Polyalkylene glycol | PFPE = Perfluoropolyether | PS = Semi-synthetic | S = Synthetic (PAO) | SE = Synthetic ester | Si = Silicone oil

Lubricating grease

Product name	Description	NLGI	Base oil viscosity at 40 °C mm /s ²	Thickening agent	Base oil	Temperature range °C	Standards and tests
Grease for open gears							
MULTI DOPE YELLOW 	High-performance, environmentally adapted and paste-like lubricating grease. Specially developed and tested for use as a threaded grease for drill pipes and for lubricating open gears and jacking teeth in jack-up applications. The product can be used for a wide range of applications where there is low speed and high load.	0,5	44	LiCaX	SE	-40 / +140	DIN 51502: KOGEPF0-0.5N-50. ISO 6743-9: L-XEDFB0-0.5. API (RP) 5A3. OCNS group E i.h.t. Cefas dti. HOCNF-registered (NEMS).
RENOLIT GREASEWAY LICAX 90 	Recommended for the lubrication of, for example, open gears and racks where extremely good load-bearing properties are required. The lubricant also works well for screw fasteners, threads and slideways.	0,5	800	LiCaX	M	-30 - +140 max 180	DIN 51502: KPGOG0.5N-30. ISO 6743-9: L-XCDIB0.5.
CEPLATTYN 300 	Self-adhesive product reinforced with graphite that provides a "dry", dust-repellent lubricating film, high water resistance and excellent corrosion protection. Recommended as a primer on open gears, gear rods and sliding surfaces. In combination with CEPLATTYN KG 10 HMF, it provides a multi-phase system. Also works as an assembly paste for screws/bolts and pins. Also suitable for e.g. wire lubrication. Manual application.	1-2	1300	ALX	M	-30 / +250 Dry lubricating film up to +500.	Approved for underground mining by Arnsberg District Authority, Dortmund. Ref.nr: 84.12.22.63-2-1.
Environmentally friendly grease							
MULTI DOPE YELLOW 	High-performance, environmentally adapted and paste-like lubricating grease. Specially developed and tested for use as a threaded grease for drill pipes and for lubrication of open gears and jacking teeth in jack-up applications. The product can be used for a wide range of applications where there is low speed and high load.	0,5	44	LiCaX	SE	-40 / +140	DIN 51502: KOGEPF0-0.5N-50. ISO 6743-9: L-XEDFB0-0.5. API (RP) 5A3. OCNS group E i.h.t. Cefas dti. HOCNF-registered (NEMS).
PLANTOGEL GREASEWAY BIO CAH 82 	Environmentally friendly grease based on biodegradable synthetic esters thickened with anhydrous lime soap. Primarily recommended for the lubrication of heavily loaded plain bearings. Ideal for the lubrication of forestry machinery, construction equipment, agricultural machinery, water pumping and water treatment installations and shipping.	2	540	CaH	SE	-40 / +100, max 110	DIN 51502: KPE2G-40. ISO 12924: L-XC(F)BIB2. SS 155470: Environmental class B. Vessel general permit, 2013 VGP.

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LiCa = Lithium calcium | LiCaX = Lithium calcium complex | LiPX = Lithium polyethylene complex | LiX = Lithium complex | O = Inorganic | PT = Polymer | PTFE = Polytetrafluoroethylene (NB! Cannot be mixed with other greases) | PU = Polyurea | Synth. NaX = Synthetic sodium complex

Base oil legend M = Mineral | MV = Mineral white oil | PAG = Polyalkylene glycol | PFPE = Perfluoropolyether | PS = Semi-synthetic | S = Synthetic (PAO) | SE = Synthetic ester | Si = Silicone oil

Product name	Description	NLGI	Base oil viscosity at 40 °C mm ² /s	Forty-cooling agent	Base oil	Temperature range °C	Standards and tests
Butterfat pastes and pastes							
GLEITMO 100	A soft black assembly paste based on solid lubricants with molybdenum disulphide combined with specially selected mineral oil. GLEITMO 100 can be used in the running-in of heavily loaded sliding bearings, gears, guide rails, gears and threaded rods. It can also be used to lubricate screws/bolts and threaded connections, as well as mounting and pressing in bearings etc. Other applications include adjustment mechanisms as well as reaming, bending, punching and pressing.	-	-	-	M	-35 / +400	-
GLEITMO 155 	High temperature paste based on synthetic oil and white solid lubricants. High lubricity and excellent surface separation properties. Specially developed for threaded connections exposed to high temperatures. Tex bolts for turbines, exhaust screws and hot screw connections in the chemical industry and refineries.	1-2	-	-	S	-30 / +1200	-
GLEITMO 160 NEW	Copper-coloured high-temperature paste with very good lubricating properties. Contains metallic components, a special thickener, solid lubricants and mineral oil. The oil evaporates above approx. 200°C and leaves a dry lubricating film that is effective up to 1100°C. The product is recommended for threaded connections, bolts and couplings exposed to high heat, e.g. in exhaust systems in vehicles.	2	-	ALX	M	-30 / +1100	-
GLEITMO 805  	High performance, beige coloured paste with solid lubricants for machine parts subjected to high loads, vibrations and oscillating movements. Recommended included for bogie and bolt couplings, drive shaft, coil springs and as chuck paste in processing machines.	2	185	Li	M	-20 / +110	German Railway material no. DB material no. 823600.
GLEITMO WSP 5040  	A high-quality paste of solid white lubricants for various applications. Excellent properties against wear and corrosion. Protects against stick-slip and thread cutting when used as an assembly paste and in screw joints, even at high temperatures up to + 1200 °C. Also for spindles, fittings, slide rails, oscillating pins, construction machinery, etc. With low sliding speeds and high pressure.	2	250	CaX	M	-20 / +140 In hot screw connections + 1200	Authorised for underground mining by the Arnsberg District Authority, Dortmund. Ref. no: 84.12.22.63-2-1.

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LiCa = Lithium calcium | LiCaX = Lithium calcium complex | LiPX = Lithium polyethylene complex | LiX = Lithium complex | O = Inorganic | PT = Polymer | PTFE = Polytetrafluoroethylene (NB! Cannot be mixed with other greases) | PU = Polyurea | Synth. NaX = Synthetic sodium complex

Base oil legend M = Mineral | MV = Mineral white oil | PAG = Polyalkylene glycol | PFPE = Perfluoropolyether | PS = Semi-synthetic | S = Synthetic (PAO) | SE = Synthetic ester | Si = Silicone oil

Compressor and refrigeration compressor oil

Product name	Description	Viscosity 40 °C mm /s ²	Viscosity 100 °C mm /s ²	VI	Floating point °C	Flame point COC °C	Standards and tests
Compressor oil							
RENOLIN SILVERSCREW 46	High-tech air compressor oil with advanced oxidation and thermal stability, capable of performing change intervals of up to 6,000 hours. For oil-injected screw, piston and vane compressors where ISO VG 46 or 68 is recommended.	46	6,9	105	-36	244	DIN 51506-VDL. ISO 6743-3-DAJ.
RENOLIN SILVERSCREW 68		68	9	106	-40	255	
RENOLIN 503 VDL 68	Air and gas compressor oil for reciprocating and rotary compressors.	68	9,1	109	-18	250	DIN 51506-VDL.
RENOLIN UNISYN OL 32	Synthetic (PAO-based) air compressor oil for the circulation system in rotary, screw, piston and vane compressors operating at high operating temperatures. The product has a significantly longer service life compared to mineral oil-based products.	32	6,1	-	-60	240	ISO 6743-3: L-DAA, L-DAB, L-DAG, LDAH, L-DAJ, DIN 51506: VDL, DIN 51524-2: HLP, DIN 51524--3: HVLP.
RENOLIN UNISYN OL 46		46	7,9	146	-60	260	
RENOLIN UNISYN OL 68		68	10,6	144	-54	260	
Refrigeration compressor oil							
RENISO ULTRACOOOL 68	Synthetic refrigeration compressor oil with optimised chemical and thermal stability and excellent anti-wear properties. Low oil transfer and reduced risk of deposits. Particularly suitable for refrigeration systems with ammonia as refrigerant equipped with a large evaporator. Also for heat pump applications.	62	9,1	124	-48	250	DIN 51503-1: KAA. NSF H2.
RENISO TRITON SEZ 32	Synthetic refrigeration compressor oil based on polyol esters. Highly suitable for all refrigeration systems where chlorine-free HFC/FC refrigerants are used, such as R134a, R404A or R410A. also suitable for HFO and HFO/HFC refrigerants.	32	6,1	141	-57	250	DIN 51503-1: KC, KD, KE. RENISO TRITON SEZ 32 and SE 55: NSF H2.
RENISO TRITON SE 55		55	8,8	137	-48	286	
RENISO TRITON SEZ 68		68	8,9	104	-39	258	
RENISO TRITON SEZ 100		100	11,4	100	-27	266	
RENISO TRITON SE 170		173	17,1	106	-27	260	
RENISO TRITON SE 220		220	19	98	-27	294	
RENISO KC 68	High quality refrigeration compressor oil based on naphthenic base oil. Recommended for lubrication of compressors working with ammonia (R717), HCHFC (R22) and with e.g. propane, propylene and isobutane.	68	7,4	58	-39	223	DIN 51503 KAA, KC, KE. NSF H2.
RENISO SP 100	Fully synthetic, alkylbenzene-based refrigeration compressor oil with anti-wear properties for refrigerants containing chlorine. RENISO SP 100 is recommended for use in R22 and R502 systems. Excellent properties in low temperatures.	100	7,9	-	-24	190	DIN 51503: KC, KE.

Cleaning and degreasing agents

Product name	Description	Density 15° C kg/m ³	pH concentrate	Material recommendation	Standards and tests
Water-miscible cleaning fluid					
EXICLEAN ALKA BIO	Alkaline cleaner for all types of surfaces that can be used with all types of cleaning equipment. Contains unique surfactants that effectively remove oil, sludge, clay, dirt and soot from all types of surfaces, including painted surfaces.	1092	13	Steel, cast iron	HOCNF- registre d (NEMS).
EXICLEAN ALKA EXTREME	Highly concentrated alkaline cleaner recommended for the toughest cleaning tasks. Contains a combination of biodegradable surfactants, lye and complex binders that effectively dissolve proteins, vegetable and animal fats on all surfaces that can withstand highly alkaline products. Suitable for use in high-pressure washers, but also for manual methods. The product does not contain perfume, phosphate or preservatives.	1060	>13	Steel, cast iron	-
ALKALINE EXIGREASE	Effective water-based alkaline degreaser with a very wide range of applications. The product is recommended for cleaning all types of vehicles, as well as caravans, garden furniture, rubbish bins and exterior wooden facades, but also for general cleaning in bathrooms and kitchens. The product is well suited for high-pressure machines, but can also be applied manually with a spray, sponge or rag. When used correctly, the product is gentle on all types of surfaces.	1030	10.5 (at 5%)	All materials	-
EXICLEAN RUST BIO	Concentrated cleaner for effective removal of rust on aluminium, brass, copper and steel. Based on weak acids and biodegradable surfactants. The product does not contain perfume, phosphate or preservatives.	1105	2 (at 1%)	All materials	-

Product name	Description	Viscosity 40° C mm /s ²	Density 15° C kg/m ³	Flame point PM °C	Standards and tests
Cold degreasing fluid					
EXIGREASE LOW AROMATIC	Effective low-aromatic degreaser with emulsifier intended for all types of heavily soiled hard surfaces. The product is recommended for cleaning all types of vehicles, engines, engine parts, tools, lubrication pits and workshop floors. Use in concentrated form and apply by brushing, dipping or spraying at low pressure. The product has a low flavour content and thus obvious health and environmental benefits compared to other solvent-based products. The product does not attack metal or paint.	-	810	73	-
EXIGREASE SOLVENT	High performance solvent-based degreaser with emulsifier for all types of heavily soiled hard surfaces. The product is recommended for cleaning all types of vehicles, engines, engine parts, tools, grease pits and workshop floors. Use concentrated and apply by brushing, dipping or spraying at low pressures. The product does not attack metals or paintwork.	-	800	65	-

Engine antifreeze

Product name	Description	Specification	Authorisations	FUCHS recommends
MAINTAIN FRICOFIN	Premium Performance anti-freeze liquid based on monoethy- long-life carbon and hybrid technology. Does not contain nitrite, amines and phosphate.	AFNOR NF R 15-601 TYPE 1 AS/NZS 2108:2004 TYPE A ASTM D 3306 TYPE I ASTM D 4985 BS 6580:2010 CUNA NC 956-16 SAE J814 SAE J1034	BMW LC-87 CAT / MWM TR 0199-99-2091 DEUTZ DQC CA-14 INNIO JENBACHER TA 1000-0201 MAN 324 TYPE NF MAN 324 TYPE NF PRI- TARDER MB-APPROVAL 325.0 MTU MTL 5048 PN-C 40007:2000 VOITH TURBO 172.00225010	BMW GS 94000 DAF 74001 LIEBHERR TLV 035/TLV 23009 A OPEL/GM B 040 0240 VW TL 774-C (G11)
MAINTAIN FRICOFIN LL	Premium Performance refrigeration liquid based on monoethy- Lenglykol with OAT (Organic Additive Technology), based on an advanced non-consumable corrosion inhibitor. Does not contain nitrite, amine, phosphate or silicates. Colour: Orange.	ASTM D 3306 TYPE I ASTM D 6210 TYPE I-FF BS 6580:2010 FORD WSS-M97-B44-D JAGUAR LAND ROVER STJLR.651.5003 FVV booklet R443 KSM 2142 SAE J814 A 26-361-88/1	Bez.Reg.Amsbg. E62.12.22.64-2011-1 CAT / MWM TR 0199-99-2091 DAF 74002 DEUTZ DQC CB-14 MAN 324 TYPE SNF MB-APPROVAL 325.3 MTU MTL 5048	AFNOR NFR 15-601 TYPE I AS/NZS 2108:2004 TYPE A ASTM D 4985 ADE (ATLANTIS DIESEL ENGINES) BAIC GROUP FOTON Q-FPT 2313005-2013 CATERPILLAR MAK A4.05.09.01 CHRYSLER MS 12106 CNH MAT 3624 CNH MAT 3724 CUMMINS (ISBe engines at DAF and Leyland) CUMMINS CES 14603, CES 14439 DETROIT DIESEL 93K217 FIAT 9.55523 GM GMW 3420 (6277M)/GME L 1301 HYUNDAI MS 591-08 JASO M325 JIS K2234 JOHN DEERE JDM H5 KOMATSU AF-NAC (07.892 (2009)) LIEBHERR MD 1-36-130 MACK 014 GS 17009 MAZDA MEZ MN 121 D PSA B 71 5110 RENAULT 41-01-001/- -S Type D SAAB B 040 1065 SAE J1034 SKODA 61-0-0257 TOYOTA TSK 2601G-8A VW TL 774-D/F (G12+ / different colour) VOLVO COOLANT VCS (STD 418-0001) VOLVO COOLANT XLC (STD 418-0005)
MAINTAIN FRICOFIN LL 50	Premium Performance finished leaf antifreeze based on monoethylene glycol. Free from nitrites, amines, boron, phosphates and silicate with OAT technology. Provides frost protection down to -35°C. Colour: Orange.	ASTM D 3306 TYPE III ASTM D 6210 TYPE III-FF BS 6580:2010	-	ASTM D 4985 CATERPILLAR MAK A4.05.09.01 CAT / MWM TR 0199-99-2091 CHRYSLER MS 12106 CNH MAT 3624 CUMMINS CES 14603, CES 14439 DAF 74002 DETROIT DIESEL 93K217 DEUTZ DQC CB-14 FIAT 9.55523 FORD WSS-M97-B44-D2 GM GMW 3420 (6277M) HYUNDAI MS 591-08 JAGUAR LAND ROVER STJLR.651.5003 JOHN DEERE JDM H5 KOMATSU AF-NAC (ready mix) (07.892 (2009)) LIEBHERR MD 1-36-130 MACK 014 GS 17009 MAN 324 TYPE SNF MAZDA MEZ MN 121 D MB 326.3 PSA B 71 5110 RENAULT 41-01-001/- -S Type D SAAB B 040 1065 SAE J1034 SKODA 61-0-0257 TOYOTA TSK 2601G-8A VAUXHALL GME L1301 VOLVO COOLANT VCS (STD 418-0001) VW TL 774-D/F (G12+ / different colour)

Spray



Product name	Description
ANTICORIT DFG SPRAY 	Rust-dissolving spray with corrosion-resistant and good lubricating properties. Effective as a lubricant for locks, hinges, leaf springs, tools, joints etc.
CASSIDA CHAIN OIL 320 SPRAY 	Fully synthetic chain oils with very high performance. High resistance to shedding and dewaxing. Excellent protection against wear and corrosion. For lubrication of drive and conveyor chains in the food and beverage industry. Can be applied by brush, with an automatic lubrication system or sprayed. NSF H1, NSF ISO 21469, Kosher, Halal.
CASSIDA FLUID FL 5 SPRAY 	Fully synthetic, penetrating oil with excellent creep and penetration properties. Capillary effect enables rapid penetration between rusty and crusty contact surfaces. Lubricates and protects against corrosion. Has a neutral odour and taste. Can be used to dismantle screws, nuts and other components. Can be used for the lubrication of various non-demanding applications where food grade lubricants are required. NSF H1, NSF ISO 21469, Kosher, Halal.
CEPLATTYN 300 SPRAY 	Recommended for lubrication of open gears, toothed rods, chains, etc., where it is convenient to apply by spray. The product is adhesive, penetrating and water-repellent. The product can withstand extra high loads and is reinforced with graphite, which gives the product a black colour.
FUCHS CHAIN LUBE	Chain spray that penetrates well into the chain and has extremely good adhesion. The product effectively protects against wear and corrosion and does not shed off the chain at high speeds.
RENOLIT CA-LZ SPRAY 	Universal grease for the lubrication of hard-to-reach surfaces. The product is highly adhesive, penetrating, water-repellent and can withstand high loads. Recommended for the lubrication of sliding surfaces where it is convenient to apply with a spray, such as bolts, chains and undercarriage surfaces.

Product name	Description
Rivolta A.C.S. 3 Spray	Extremely fast evaporating degreasing spray based on acetone. The product has an extremely good ability to dissolve oil and grease, as well as adhesive and sealant residues on shiny metal surfaces.
Rivolta B.F.C. Spray 	Foam cleaner for all types of materials. The product is especially suitable for vertical surfaces. NSF A1 listed.
Rivolta K.S.P. 312 N Spray 	Anti-corrosion spray that gives a waxy surface. The product is suitable for outdoor storage under cover for 6 - 12 months or long-term indoor storage.
Rivolta M.T.X. 60 strength spray	Acetone-free, fast evaporating degreasing spray based on synthetic hydrocarbons and leaves no residue. Specially adapted for cleaning metal parts from grease, oils and waxes.
Rivolta S.B.C. Spray 	Degreasing spray that evaporates quickly and leaves no residue. The product is NSF-A1 listed and is therefore suitable as a degreasing agent in the food and pharmaceutical industries.
Rivolta S.L.X. 500 Spray	Cleaning spray for safe cleaning in electronics and mechanics. For sensitive electrical installations, components and equipment during operation and with voltage on. NSF K2.
Rivolta S.L.X. Top Spray 	Unique cleaning spray for electrical components. Effectively removes grease and contaminants that can lead to power loss and interference. NOTE! No voltage on when cleaning.
Rivolta T.R.S. Plus Spray 	Fully synthetic "creep oil" that removes moisture and lubricates rusty details.

Analysers

Lab Advisor Alert

Alert offers ready-made analysis packages for different types of oils and applications. Alert is part of a systematised maintenance where you quickly get an indication of whether something is wrong, e.g. if you have antifreeze in the engine oil or if the flash point of an oil has changed. The results from Alert are also used for trend analyses where oil change intervals can be optimised.

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It's easy to get started with Alert, you order the sample pack where you order your other lubricant products. The package includes everything you need: sample bottle, absorbent paper, transport cylinder with pre-printed address, customs declaration and clear instructions on how to take the sample.

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Here's how it works

To maximise the benefit of the oil sample, it is important to have a dialogue between you, our sales representative, the application engineer and the laboratory. Talk to your sales contact to book the service. The application engineer will help you through the entire process from sampling to technical assessment of the analysis result and recommendation of measures.

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If analyses are carried out in connection with a detected or suspected problem, it is important that we get as much information as possible about the problem. Information about accidents or unusual odours from the plant are often important clues for us to quickly assess the sample.



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