



ORLEN OIL

PRODUCT CATALOGUE FOR INDUSTRY



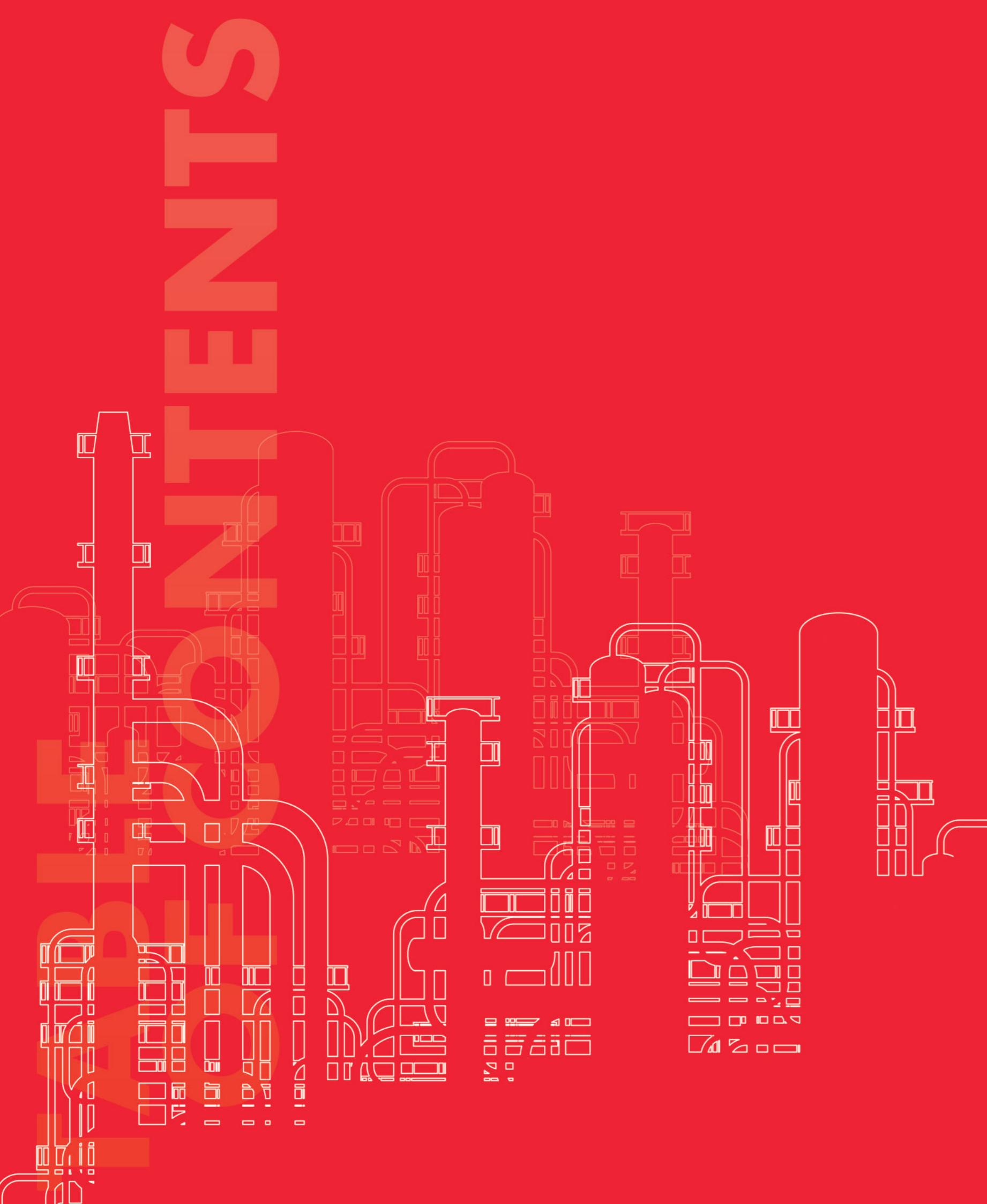


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LEADER

Following its merger with LOTOS Oil in 2023, ORLEN OIL has become the market leader, meeting 125% of the Polish market's demand for lubricants. The quality of our products and the company's development are overseen by approximately 700 qualified employees. Together we aim for success!

BRAND

ORLEN OIL is part of the ORLEN Capital Group. ORLEN S.A. is a multi-energy corporation managing the petrochemical and upstream segments. It operates refineries in Poland, the Czech Republic and Lithuania, and service station networks in Poland, Germany, the Czech Republic, as well as Slovakia, Lithuania, Hungary and Austria.



Refinery

7 refineries

in Poland, the Czech Republic and Lithuania

>30 million tonnes of

annual crude oil processing

0.3 million tonnes of

biofuel products



Petrochemicals

40

petrochemical products sold to over 60 countries

16%

share of speciality products in the portfolio



Retail

3500 stations across 7 markets

2600 foodservice outlets

Over 15 million

petrol station customers in the region

3 million

electricity consumers



Upstream

1278 million boe of

2P resources in Canada, Poland, Norway and Lithuania

>154,000 boe/d

average hydrocarbon production



Power industry

5.1 GW

of installed capacity, including: 0.8 GW in RES and 1.7 GW in gas-fired sources

200 thousand km

of power lines

ORLEN OIL

Who are we?



EFFICIENCY

We operate 4 production facilities, including a state-of-the-art logistics centre in Trzebinia and advanced marine logistics in Gdańsk, environmentally friendly production from used oils in Jedlicze, and a lubricant production line in Czechowice-Dziedzice. Logistics and production efficiency for our domestic and international Customers is our priority.

PRODUCTION

We have an annual production capacity of 420 thousand tonnes of finished products, derived from base oils sourced from some of the most advanced refineries in Central and Eastern Europe: the Gdańsk Refinery and the Płock Refinery of ORLEN S.A. ORLEN OIL guarantees supply reliability, consistent production batches, and technologically advanced additives. The quality and compliance of ORLEN OIL products with the claims stated on the label are confirmed by the company's membership in the ATIEL organisation. We are transparent because our brand commits us to accountability.

DISTRIBUTION

4 continents, 81 countries, 202 distributors – these figures reflect the global reach of ORLEN OIL's lubricant products. Our products are valued both in the heat of Africa and in the cold climates of the Arctic Circle. Each country we serve finds in our range solutions tailored to the specific needs of its automotive markets.

INVESTMENTS

We are constructing a state-of-the-art HBO oil block to better meet the growing global demand for lubricants. From 2025 onwards, using proven Chevron Lummus Global IDW technology, we will produce our own premium Group II base oils, further expanding our range of finished products.





Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point [°C], COC	Corrosive effect on Cu plate, 100°C/3h	Quality class	Approvals	Product description		
HYDROL BIO HEES EL 46	919.8	47.0	191	-48	300	1	PN-ISO 15380	-	Readily biodegradable hydraulic oil based on specially selected synthetic esters. Recommended for industrial and mobile hydrostatic hydraulic systems where there is a potential risk of oil entering the environment.		
HYDROL BIO HETG EL 46 *	917.7	47.7	207	-23	306				Readily biodegradable hydraulic oil based on specially selected vegetable oil. Recommended for industrial and mobile hydrostatic hydraulic systems where there is a potential risk of oil entering the environment.		
HYDROL HEAVY L-HV/HVLP 15	857.0	15.0	155	-42	189	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV	Complies with: <ul style="list-style-type: none"> Bosch-Rexroth RDE 90235 Parker Denison HF0, HF1, HF Eaton Brochure 03-401-2010 Eaton Specification EFDGN-TB002-E Fives Cincinnati P-68, 69, 70 	Modern hydraulic oils recommended for heavily loaded power transmission and hydraulic drive and control systems. Used in mobile hydraulic systems (operating under variable temperature conditions) of excavators, bulldozers, lifts, mining equipment, as well as in industrial systems and equipment (including in the marine industry).		
HYDROL HEAVY L-HV/HVLP 32	868.8	32.4	167	-48	215						
HYDROL HEAVY L-HV/HVLP 46	877.8	46.0	157	-42	226	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV	Holds: <ul style="list-style-type: none"> GIG Certificate mark B Complies with: <ul style="list-style-type: none"> Parker Denison HF0, HF1, HF2 Eaton Brochure 03-401-2010 Eaton Specification EFDGN-TB002-E Fives Cincinnati P-68, 69, 70 	Hydraulic oils with an increased viscosity index, intended for lubrication of hydraulic systems in mobile construction machinery, mining machinery, and stationary industrial equipment. The DYNAVIS® technology by EVONIK allows for reduced fuel consumption and lower energy use.		
HYDROL HEAVY L-HV/HVLP 68	878.0	66.2	157	-39	221						
HYDROL HEAVY L-HV/HVLP 100	880.0	100.0	150	-39	246	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV	Complies with: <ul style="list-style-type: none"> Parker Denison HF0, HF1, HF2 Eaton Brochure 03-401-2010 Eaton Specification EFDGN-TB002-E Fives Cincinnati P-68, 69, 70 	Mineral zinc-based oils with an increased viscosity index. They contain carefully selected additives providing lubricating, anti-corrosion, antioxidant, demulsifying and anti-foam properties. Designed for heavily loaded power transmission and hydraulic drive and control systems in the hydraulic circuits of construction and mining machinery.		
HYDROL POWER L-HV 32 *	855.9	32.2	186	-39	-	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV				
HYDROL POWER L-HV 46	866.8	48.6	180	-39							
HYDROL POWER L-HV 68 *	871.5	68.4	180	-36	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV	Holds: <ul style="list-style-type: none"> GIG Certificate mark B Complies with: <ul style="list-style-type: none"> Parker Denison HF0, HF1, HF2 Eaton Brochure 03-401-2010 Eaton Specification EFDGN-TB002-E Fives Cincinnati P-68, 69, 70 	Synthetic, zinc-free and ash-free hydraulic oil based on polyalphaolefins (PAO). Recommended for use in heavily loaded power transmission and hydraulic drive and control systems operating under very demanding conditions, with high ambient temperatures and humidity.			
HYDROL L-HV PLUS 32 *	862.2	31.2	180	-45	199						
HYDROL L-HV PLUS 46	872.5	46.9	180	-45	205	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV	Complies with: <ul style="list-style-type: none"> Parker Denison HF0, HF1, HF2 Eaton Brochure 03-401-2010 Eaton Specification EFDGN-TB002-E Fives Cincinnati P-68, 69, 70 	Mineral zinc-based oils with an increased viscosity index. They contain carefully selected additives providing lubricating, anti-corrosion, antioxidant, demulsifying and anti-foam properties. Designed for heavily loaded power transmission and hydraulic drive and control systems in the hydraulic circuits of construction and mining machinery.		
HYDROL L-HV PLUS 68	877.2	66.2	178	-45	217						
HYDROL SYNT PE 46 *	839.0	43.7	140	-54	258	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV	-	Synthetic, zinc-free and ash-free hydraulic oil based on polyalphaolefins (PAO). Recommended for use in heavily loaded power transmission and hydraulic drive and control systems operating under very demanding conditions, with high ambient temperatures and humidity.		
HYDROL EXTRA L-HV 32	853.9	32.0	158	-42	-	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV	Holds: <ul style="list-style-type: none"> GIG Certificate mark B Complies with: <ul style="list-style-type: none"> Parker Denison HF0, HF1, HF2 Eaton Brochure 03-401-2010 Eaton Specification EFDGN-TB002-E Fives Cincinnati P-68, 69, 70 	Mineral zinc-based oils with an increased viscosity index. They contain carefully selected additives providing lubricating, anti-corrosion, antioxidant, demulsifying and anti-foam properties. Designed for heavily loaded power transmission and hydraulic drive and control systems in the hydraulic circuits of construction and mining machinery.		
HYDROL EXTRA L-HV 46	878.4	47.0	157	-39							
HYDROL EXTRA L-HV 68	884.4	68.6	155	-36	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV	Complies with: <ul style="list-style-type: none"> Parker Denison HF0, HF1, HF2 Eaton Brochure 03-401-2010 Eaton Specification EFDGN-TB002-E Fives Cincinnati P-68, 69, 70 	Mineral zinc-based oils with an increased viscosity index. They contain carefully selected additives providing lubricating, anti-corrosion, antioxidant, demulsifying and anti-foam properties. Designed for heavily loaded power transmission and hydraulic drive and control systems in the hydraulic circuits of construction and mining machinery.			
HYDROL ARCTIC L-HV 15 *	874.4	15.9	330	-63	136						
HYDROL ARCTIC L-HV 32	866.0	32.2	263	-56	164	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV	Holds: <ul style="list-style-type: none"> GIG Certificate mark B Complies with: <ul style="list-style-type: none"> Parker Denison HF0, HF1, HF2 Eaton Brochure 03-401-2010 Eaton Specification EFDGN-TB002-E Fives Cincinnati P-68, 69, 70 	Hydraulic oils with excellent low-temperature properties and a very high viscosity index. Designed for use in hydraulic systems operating in extremely low ambient temperatures.		
HYDROL PREMIUM L-HV 15 *	845.6	16.3	153	-39	191						
HYDROL PREMIUM L-HV 22 *	861.7	21.7	152	-37	195	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV	Complies with: <ul style="list-style-type: none"> Parker Denison HF0, HF1, HF2 Eaton Brochure 03-401-2010 Eaton Specification EFDGN-TB002-E Fives Cincinnati P-68, 69, 70 	Zinc-free hydraulic oils designed for heavily loaded power transmission and hydraulic drive and control systems operating under extremely demanding conditions of high pressure and across a wide temperature range.		
HYDROL PREMIUM L-HV 32	867.3	31.6	165	-39	203						
HYDROL PREMIUM L-HV 46	875.6	45.9	148	-34	210	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV	Holds: <ul style="list-style-type: none"> GIG Certificate mark B Complies with: <ul style="list-style-type: none"> Parker Denison HF0, HF1, HF2 Eaton Brochure 03-401-2010 Eaton Specification EFDGN-TB002-E Fives Cincinnati P-68, 69, 70 	Hydraulic oils intended for use in heavily loaded drive systems, high-pressure fixed and variable displacement piston pumps, and in precision hydraulic control systems and hydraulic installations. These oils are characterised by a high level of anti-wear properties and significantly improved viscosity-temperature characteristics compared to L-HM type hydraulic oils.		
HYDROL PREMIUM L-HV 68	880.5	65.9	146	-30	221						
HYDROL L-HV 15	856.6	16.0	198	-40	178	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV	Complies with: <ul style="list-style-type: none"> Parker Denison HF0, HF1, HF2 Eaton Brochure 03-401-2010 Eaton Specification EFDGN-TB002-E Fives Cincinnati P-68, 69, 70 	Zinc-free hydraulic oils designed for heavily loaded power transmission and hydraulic drive and control systems operating under extremely demanding conditions of high pressure and across a wide temperature range.		
HYDROL L-HV 22	862.6	22.2	169	-39	192						
HYDROL L-HV 32	868.2	30.8	155	-35	205	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV	Holds: <ul style="list-style-type: none"> GIG Certificate mark B Complies with: <ul style="list-style-type: none"> Parker Denison HF0, HF1, HF2 Eaton Brochure 03-401-2010 Eaton Specification EFDGN-TB002-E Fives Cincinnati P-68, 69, 70 	Hydraulic oils intended for use in heavily loaded drive systems, high-pressure fixed and variable displacement piston pumps, and in precision hydraulic control systems and hydraulic installations. These oils are characterised by a high level of anti-wear properties and significantly improved viscosity-temperature characteristics compared to L-HM type hydraulic oils.		
HYDROL L-HV 46	875.9	44.8	154	-42	209						
HYDROL L-HV 68	880.3	65.0	148	-30	223	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV	Complies with: <ul style="list-style-type: none"> Parker Denison HF0, HF1, HF2 Eaton Brochure 03-401-2010 Eaton Specification EFDGN-TB002-E Fives Cincinnati P-68, 69, 70 	Zinc-free hydraulic oils designed for heavily loaded power transmission and hydraulic drive and control systems operating under extremely demanding conditions of high pressure and across a wide temperature range.		
HYDROL L-HV 100	884.3	91.6	148	-30	232						

If you have any application concerns, please contact the Oil Service Team. For contact details, see page 25 of the catalogue; e-mail: servis@orlenoil.pl

* Product available periodically on special order

PREMIUM - zinc-free oils

PAO - polyalphaolefins

COMPLIES WITH - complies with the approval requirements

HOLDS - holds approval or certificate



Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point [°C], COC	Corrosive effect on Cu plate, 100°C/3h	Quality class	Approvals	Product description
HYDROL EXTRA HLP-D 32 *	869.0	31.9	99	-35	216	1a	DIN 51524-2 HLPD ISO 6743-4 HM ISO 11158 HM	-	High-quality, zinc-free hydraulic oil with detergent properties. The product is intended for use in stationary and mobile hydraulic systems operating under variable operating conditions, high pressure, and high thermal loads. The oil is especially dedicated for continuous operation systems and for applications where there is a risk of system contamination with water or condensed steam.
HYDROL PREMIUM HLP-D 15 *	857.7	14.4	109	-30	170	1	DIN 51524-2 HLPD ISO 6743-4 HM ISO 11158 HM	-	High-quality, zinc-free hydraulic oil with detergent properties. The product is intended for use in stationary and mobile hydraulic systems operating under variable operating conditions, high pressure, and high thermal loads. The oil is especially dedicated for continuous operation systems and for applications where there is a risk of system contamination with water or condensed steam.
HYDROL PREMIUM HLP-D 32	874.1	31.1	98	-34	215			-	Hydraulic oils with detergent properties, intended for use in various types of stationary and mobile hydraulic systems of machinery and equipment operating under normal and severe working conditions, particularly in continuous operation systems and where there is a risk of system contamination with water or condensed steam.
HYDROL PREMIUM HLP-D 46	879.5	45.9	98	-27	225	1	DIN 51524-2 HLPD ISO 6743-4 HM ISO 11158 HM	Holds: - Schuler - Müller Weingarten DT55005	Hydraulic oils developed in cooperation with leading manufacturers of hydraulic systems and components, including BOSCH-REXROTH, PARKER DENISON, EATON. These oils are recommended for heavily loaded power transmission and hydraulic drive and control systems. Used in mobile hydraulic systems (operating under variable temperature conditions) of excavators, bulldozers, lifts, mining equipment, as well as in industrial systems and equipment (including in the marine industry).
HYDROL PREMIUM HLP-D 68	883.5	68.3	96	-25	230			Complies with: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	
HYDROL HLP-D 22	867.1	22.1	106	-33	217	1	DIN 51524-2 HLPD ISO 6743-4 HM ISO 11158 HM	Holds: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	Modern hydraulic oils developed in cooperation with leading manufacturers of hydraulic systems and components, including BOSCH-REXROTH, PARKER DENISON, EATON. These oils are recommended for heavily loaded power transmission and hydraulic drive and control systems. Used in mobile hydraulic systems (operating under variable temperature conditions) of excavators, bulldozers, lifts, mining equipment, as well as in industrial systems and equipment (including in the marine industry).
HYDROL HLP-D 32	873.8	30.9	104	-33	210			Complies with: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	
HYDROL HLP-D 46	880.7	45.7	102	-30	225	1a	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM	Complies with: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	Zinc-free hydraulic oils designed for use in heavily loaded power transmission and hydraulic drive and control systems operating under extremely demanding conditions of high pressures and high temperatures.
HYDROL HLP-D 68	886.2	67.6	99	-30	232			Complies with: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	
HYDROL HEAVY L-HM/HLP 15 *	852.3	14.6	111	-30	170	1a	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM	-	Modern hydraulic oils developed in cooperation with leading manufacturers of hydraulic systems and components, including BOSCH-REXROTH, PARKER DENISON, EATON. These oils are recommended for heavily loaded power transmission and hydraulic drive and control systems. Used in mobile hydraulic systems (operating under variable temperature conditions) of excavators, bulldozers, lifts, mining equipment, as well as in industrial systems and equipment (including in the marine industry).
HYDROL HEAVY L-HM/HLP 22	867.1	22.4	101	-33	210			Holds: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	
HYDROL HEAVY L-HM/HLP 32	875.4	32.8	105	-33	228	1a	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM	Complies with: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	Hydraulic oils intended for use in heavily loaded power transmission and hydraulic drive and control systems, such as hydraulic gearboxes, regulating and control mechanisms, and other similar equipment, operating under difficult conditions with elevated temperatures and humidity.
HYDROL HEAVY L-HM/HLP 46	880.3	46.3	105	-30	230			Complies with: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	
HYDROL HEAVY L-HM/HLP 68	886.0	68.1	100	-30	248	1a	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM	Holds: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	Hydraulic oils intended for use in heavily loaded power transmission and hydraulic drive and control systems, such as hydraulic gearboxes, regulating and control mechanisms, and other similar equipment, operating under difficult conditions with elevated temperatures and humidity.
HYDROL HEAVY L-HM/HLP 100 *	891.5	101.1	99	-30	250			Complies with: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	
HYDROL HEAVY L-HM/HLP 150 *	894.3	154.6	100	-30	268	1a	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM	Holds: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	Hydraulic oils intended for use in heavily loaded power transmission and hydraulic drive and control systems, such as hydraulic gearboxes, regulating and control mechanisms, and other similar equipment, operating under difficult conditions with elevated temperatures and humidity.
HYDROL PREMIUM L-HM 22	864.3	22.5	102	-34	194			Complies with: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	
HYDROL PREMIUM L-HM 32	874.4	31.8	102	-28	210	1a	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM	Holds: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	Hydraulic oils intended for use in heavily loaded power transmission and hydraulic drive and control systems, such as hydraulic gearboxes, regulating and control mechanisms, and other similar equipment, operating under difficult conditions with elevated temperatures and humidity.
HYDROL PREMIUM L-HM 46	879.0	45.6	102	-27	212			Complies with: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	
HYDROL PREMIUM L-HM 68	884.2	65.0	102	-26	224	1a	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM	Holds: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	Hydraulic oils intended for use in heavily loaded power transmission and hydraulic drive and control systems, such as hydraulic gearboxes, regulating and control mechanisms, and other similar equipment, operating under difficult conditions with elevated temperatures and humidity.
HYDROL PREMIUM L-HM 150	893.9	147.6	95	-27	290			Complies with: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	
HYDROL L-HM/HLP 10	853.9	10.1	101	-36	162	1a	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM	Holds: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	Hydraulic oils intended for use in heavily loaded power transmission and hydraulic drive and control systems, such as hydraulic gearboxes, regulating and control mechanisms, and other similar equipment, operating under difficult conditions with elevated temperatures and humidity.
HYDROL L-HM/HLP 15	860.8	15.1	102	-35	180			Complies with: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	
HYDROL L-HM/HLP 22	865.3	21.9	102	-35	195	1a	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM	Holds: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	Hydraulic oils intended for use in heavily loaded power transmission and hydraulic drive and control systems, such as hydraulic gearboxes, regulating and control mechanisms, and other similar equipment, operating under difficult conditions with elevated temperatures and humidity.
HYDROL L-HM/HLP 32	873.5	30.4	103	-30	211			Complies with: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	
HYDROL L-HM/HLP 46	879.5	45.3	104	-30	227	1a	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM	Holds: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	Hydraulic oils intended for use in heavily loaded power transmission and hydraulic drive and control systems, such as hydraulic gearboxes, regulating and control mechanisms, and other similar equipment, operating under difficult conditions with elevated temperatures and humidity.
HYDROL L-HM/HLP 68	885.6	66.8	100	-27	237			Complies with: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	
HYDROL L-HM/HLP 100	878.7	98.3	99	-23	273	1a	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM	Complies with: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70	Hydraulic oils intended for use in heavily loaded power transmission and hydraulic drive and control systems, such as hydraulic gearboxes, regulating and control mechanisms, and other similar equipment, operating under difficult conditions with elevated temperatures and humidity.
HYDROL L-HM/HLP 150	883.2	143.2	96	-18	282			Complies with: - Bosch-Rexroth RDE 90235 - Parker Denison HF0, HF1, HF2 - Eaton Brochure 03-401-2010 - Fives Cincinnati P-68, 69, 70 - GIG Certificate mark B	

If you have any application concerns, please contact the Oil Service Team. For contact details, see page 25 of the catalogue; e-mail: servis@orlenoil.pl

* Product available periodically on special order

PREMIUM – zinc-free oils
COMPLIES WITH – complies with the

approval requirements
HOLDS – holds approval or certificate



Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point [°C], COC	Corrosive effect on Cu plate, 100°C/3h	Quality class	Approvals	Product description
HYDROL L-HL 15	858.4	14.4	100	-35	180	1a	DIN 51524-1 HL ISO 6743-4 HL ISO 11158 HL	-	Hydraulic oils intended for use in low and medium loaded power transmission and hydraulic drive and control systems of hydrostatically driven equipment operating under moderate temperature conditions.
HYDROL L-HL 22	866.6	21.9	103	-33	197			-	
HYDROL L-HL 32	874.1	31.0	103	-30	218			-	
HYDROL L-HL 46	880.1	45.5	101	-28	224			-	
HYDROL L-HL 68	884.8	66.4	98	-27	230			-	
HYDROL L-HL 100	879.7	101.3	95	-19	264			-	
HYDROL L-HL 150	885.2	149.1	96	-16	277			-	
ORLEN OIL H-515	869.9	13.1	390	-63	93	1 (135°C/72h)	NO-91-A202:2019 STANAG 3748:2015 MIL-PRF-5606J	-	Hydraulic oil for aviation and ground equipment. The product is intended for use in hydraulic systems, shock absorber assemblies, and hydraulic dampers of aircraft, as well as in the hydraulic systems of ground equipment.
HYDROL PREMIUM HVLP-D 46*	877.5	47.4	177	-42	230	1	DIN 51524-3 HVLPD ISO 6743-4 HV ISO 11158 HV	-	Zinc-free hydraulic oil with detergent properties and a high viscosity index. Intended for stationary and mobile hydraulic systems of machinery and equipment operating under normal and severe conditions where there is a risk of system contamination with water or condensed steam. It can be used in construction machinery operating in high air pollution.
HYDROL HVLP-D 46	874.5	46.3	157	-39	230	1	DIN 51524-3 HVLPD ISO 6743-4 HV ISO 11158 HV	-	Hydraulic oil with detergent properties and a high viscosity index. Intended for stationary and mobile hydraulic systems of machinery and equipment operating under normal and severe conditions where there is a risk of system contamination with water or condensed steam. It can be used in construction machinery operating in high air pollution.
HYDROL HLPT 46	877.5	42.7	123	-39	220	1	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM	-	Hydraulic oil intended for use in heavily loaded power transmission and hydraulic drive and control systems, such as hydraulic gearboxes, regulating and control mechanisms, and other similar equipment, operating under difficult conditions with elevated temperatures and humidity. The product features enhanced physico-chemical properties.
HYDROL SPECIAL 46 *	875.6	48.8	123	-39	220	1	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM	-	Hydraulic oils with enhanced oxidation resistance. Intended for lubrication of power transmission systems, hydraulic drive and control systems of regulating and control mechanisms, and hydraulic gearboxes. These products are designed for use in stationary and mobile industrial machinery, vehicles, construction machinery, and mining equipment.
HYDROL SPECIAL 68 *	883.8	69.3	115	-42	225			-	Complies with: - Parker Denison HF0, HF1, HF2
O.OIL OTHP3 ISO VG 32	872.0	30.9	122	-42	202	1	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM	-	

If you have any application concerns, please contact the Oil Service Team. For contact details, see page 25 of the catalogue; e-mail: servis@orlenoil.pl

* Product available periodically on special order

Hydraulic Oils



Fire-Resistant Hydraulic Fluids



Table Viscosity classification of industrial oils according to ISO 3448	
ISO 3448 Viscosity Grade	Permissible range of kinematic viscosity at 40°C for the given oil grade [mm²/s]
2	1.98 - 2.42
3	2.88 - 3.52
5	4.14 - 5.06
7	6.12 - 7.48
10	9.00 - 11.0
15	13.5 - 16.5
22	19.8 - 24.2
32	28.8 - 35.2
46	41.4 - 50.6
68	61.2 - 74.8
100	90 - 110
150	135 - 165
220	198 - 242
320	288 - 352
460	414 - 506
680	612 - 748
1000	900 - 1100
1500	1350 - 1650

Table Classification of industrial oils according to ISO and DIN			
ISO 6743/4	DIN 51 524	Composition	Application
HL	HL	Mineral oils with improved anti-corrosion and antioxidant properties	Hydraulic oils intended for use in low and medium loaded power transmission and hydraulic drive and control systems of hydrostatically driven equipment operating under moderate temperature conditions.
HM	HLP	HL oils with improved anti-wear properties	Hydraulic oils intended for use in heavily loaded power transmission and hydraulic drive and control systems, such as hydraulic gearboxes, regulating and control mechanisms, and other similar equipment, operating under difficult conditions with elevated temperatures and humidity.
-	HLPD	Mineral oils with anti-wear, antioxidant and anti-corrosion additives. They contain detergent-dispersant additives.	For use in various types of stationary and mobile hydraulic systems of machinery and equipment operating under normal and severe working conditions, where there is a risk of system contamination with water or condensed steam.
HV	HVLP	HM oils with improved viscosity-temperature properties	Hydraulic oils intended for use in heavily loaded drive systems, high-pressure fixed and variable displacement piston pumps, and in precision hydraulic control systems and hydraulic installations.
HEES	-	Synthetic esters	Biodegradable hydraulic oils recommended for industrial and mobile hydrostatic hydraulic systems where there is a potential risk of oil entering the environment.
HETG	-	Triglycerides	

Product name	Kinematic viscosity at 40°C [mm²/s]	Water content by distillation	Emulsion pH	Certificate	Product description
HYDROKOP SEMISYNTETIC	52.0	60	8 to 10	Holds: - GIG Certificate mark B	Microemulsion concentrate for the preparation of micro-emulsions at a concentration of 0.5 - 2 % (m/m), used in mining as a fire-resistant hydraulic fluid HFAE with water of total hardness up to 750 mg CaCO ₃ /l (42 °n).
HYDRAFER HFC 46	41.8	221	9.80	1	Fire-resistant hydraulic fluid used to power the hydraulic systems of machines and equipment. Produced based on glycol, a special package of performance additives, and demineralised water. The product is intended for use in hydraulic systems of machines and equipment operating in particularly hazardous conditions, such as in mining, coke production, metallurgy, and metalworking industries, for example, in die casting machines, hydraulic forging presses, roadheaders, shearer loaders, conveyors, and in other industrial sectors. The maximum operating temperature of the fluid is approx. 60°C.
Product name	Density at 20°C [g/ml]	Crystallisation temperature, max. [°C]	Boiling point [°C]	Certificate	Product description
KONHYDR T	1.076	-35	107	Holds: - GIG Certificate mark B	Product intended for transport and temporary corrosion protection of hydraulic power equipment components made of steel, copper, zinc, brass, and aluminium. The fluid may also be used as a working medium in cooling systems and as a liquid for spraying floors and wagon sides during winter to prevent freezing and clumping of coal.

If you have any application concerns, please contact the Oil Service Team. For contact details, see page 25 of the catalogue; e-mail: serwis@orlenoil.pl

HOLDS – holds approval or certificate



Hydraulic and Gear Oils

Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point [°C]	Resistance to foaming, 1 sequence [ml/ml]	Quality class	Approval / certificate	Product description
GALKOP 46	882.3	46.8	100	-26	221	0/0	DIN 51517-3 CLP DIN 51524-3 HLP	Holds: - GIG Certificate mark B	Hydraulic and gear oils recommended for lubrication of hydraulic systems and mechanical gearboxes in the mining industry and in industrial machinery.
GALKOP 68	887.6	70.6	100	-25	241				
GALKOP 100	889.2	98.6	97	-24	257				
GALKOP 150 *	892.9	151.7	95	-18	260				
TRANSOL V 32	869.5	32.3	107	-36	218	20/0	DIN 51517-3 CLP DIN 51524-2 HLP	Holds: - Voith Turbo 3625-006058 - Voith Turbo 3625-006072 - Voith Turbo 3625-006073 - Voith Turbo 3625-008426	Hydraulic and gear oil for industrial stationary couplings and hydrodynamic gearboxes of machines operating in heavy-duty conditions.

If you have any application concerns, please contact the Oil Service Team. For contact details, see page 25 of the catalogue; e-mail: serwis@orlenoil.pl

* Product available periodically on special order

HOLDS – holds approval or certificate



Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point [°C]	Corrosive effect on Cu plate, 100°C/3h	FZG	Quality class	Approval / certificate	Product description
TRANSGEAR PAG 150	998.7	152.8	201	-30						
TRANSGEAR PAG 220	100.9	217.7	174	-30						
TRANSGEAR PAG 320	100.8	329.2	198	-30						
TRANSGEAR PAG 460 *	100.6	480.7	225	-28						
TRANSGEAR EXTRA PAG 220	1059.0	226.0	233	-39	290		-	-	DIN 51517-3 CLP ISO 12925-1 CSPG, CTPG	
TRANSGEAR EXTRA PAO 150 *	852.0	150.0	177	-48	245					
TRANSGEAR EXTRA PAO 220	858.0	220.0	182	-42	245					
TRANSGEAR EXTRA PAO 320	860.0	320.0	186	-33	251					
TRANSGEAR EXTRA PAO 460	858.0	460.0	166	-30	245					
TRANSGEAR PAO 150	852.9	140.4	168	-51	258					
TRANSGEAR PAO 220	881.3	206.5	163	-39	236					
TRANSGEAR PAO 320	858.0	326.0	176	-45	274					
TRANSGEAR PAO 460	863.3	439.0	162	-39	260					
AEROMIL SYNTHETIC CLP 320	893.0	320.0	165	-36	225		1	14	DIN 51517-3 CLP AGMA 9005 E06	
TRANSGEAR PE-150 *	876.1	147.8	160	-39	240					
TRANSGEAR PE-220	883.9	216.3	163	-39	232					
TRANSGEAR PE-320	891.7	318.2	169	-39	238					
TRANSGEAR PE-460	898.1	449.2	166	-36	238					
TRANSOL EXTRA XSP 150 *	888.0	150.0	95	-18	260					
TRANSOL EXTRA XSP 220	890.0	224.0	96	-18	260					
TRANSOL EXTRA XSP 320	898.0	317.0	95	-15	260					
TRANSOL EXTRA XSP 460	901.0	460.0	96	-12	266					

If you have any application concerns, please contact the Oil Service Team. For contact details, see page 25 of the catalogue; e-mail: serwis@orlenoil.pl

*Product available periodically on special order ** Kinematic viscosity at 100°C



Product name	Density at 15°C [kg/m ³]	Kinematic viscosity at 40°C [mm ² /s]	Viscosity index	Pour point [°C]	Flash point [°C]	Corrosive effect on Cu plate, 100°C/3h	FZG	Quality class	Approval / certificate	Product description
TRANSOL SP-68	877.0	70.0	101	-30	250	12	1	DIN 51517-3 CLP ISO 6743-6 CKD ISO 12925-1 CKD AGMA 9005-F 16 AS U.S. Steel 224	Complies with: <ul style="list-style-type: none"> David Brown Type M, A & E 	Industrial gear oils produced from selectively refined mineral oils and an EP (Extreme Pressure) additive package. These products are intended for heavily loaded mechanical gearboxes in industrial equipment operating at temperatures up to 120°C.
TRANSOL SP-100	878.0	100.0	101	-30	262					
TRANSOL SP-150	883.0	150.0	99	-21	271					
TRANSOL SP-220	891.0	219.0	97	-18	272					
TRANSOL SP-320	896.0	319.0	96	-12	273					
TRANSOL SP-460	898.0	455.0	97	-9	274					
TRANSOL SP-680	901.0	678.0	98	-12	290					
TRANSOL SP-1000	902.0	1002.0	104	-6	298					
TRANSOL CLP 68	878.0	69.0	97	-27	254	1	-	DIN 51517-3 CLP ISO 6743-6 CKC ISO 12925-1 CKC AGMA 9005-F 16 AS U.S. Steel 224	Complies with: <ul style="list-style-type: none"> David Brown Type M, A & E 	Industrial gear oils produced from selectively refined mineral oils and an EP (Extreme Pressure) additive package. These products are intended for heavily loaded mechanical gearboxes in industrial equipment operating at temperatures up to 120°C.
TRANSOL CLP 100	878.0	100.0	102	-30	260					
TRANSOL CLP 150	885.0	147.0	99	-24	273					
TRANSOL CLP 220	888.0	215.0	98	-21	274					
TRANSOL CLP 320	894.0	316.0	97	-12	275					
TRANSOL CLP 460	899.0	450.0	97	-9	274					
TRANSOL CLP 680	902.0	670.0	101	-12	270					
TRANSOL 68	885.0	68.0	99	-27	229					
TRANSOL 100	890.1	97.9	96	-25	230	1	12	DIN 51517-3 CLP ISO 6743-6 CKC ISO 12925-1 CKC	Complies with: <ul style="list-style-type: none"> David Brown Type M, A & E 	Industrial gear oils produced from selectively refined mineral oils and an EP (Extreme Pressure) additive package. These products are intended for heavily loaded mechanical gearboxes in industrial equipment operating at temperatures up to 100°C.
TRANSOL 150	894.0	158.8	96	-24	235					
TRANSOL 220	897.8	224.6	95	-24	260					
TRANSOL 320	901.3	317.2	95	-15	261					
TRANSOL 460	904.6	471.5	94	-15	261					
TRANSOL 680	904.6	676.5	95	-15	260					
TRANSOL GL-1	890.0	18 **	96	-14	290	1	-	GL-1	-	Basic gear oil for lightly loaded enclosed industrial gearboxes.

If you have any application concerns, please contact the Oil Service Team. For contact details, see page 25 of the catalogue; e-mail: serwis@orlenoil.pl

*Product available periodically on special order ** Kinematic viscosity at 100°C

Compressor Oils



Compressor Oils



Product name	Kinematic viscosity at 40°C [mm²/s]	Viscosity index	Flash point, COC [°C]	Pour point [°C]	Quality class	Product description
CORALIA L-DAA 46 *	44.7	100	223	-12	ISO 6743-3 L-DAA DIN 51506 VB, VBL	Oils intended for the lubrication of air-cooled piston compressors and rotary vane compressors with drip-feed lubrication operating under light-duty conditions.
CORALIA L-DAA 68 *	68.0	97	248			
CORALIA L-DAA 100	97.4	99	270			
CORALIA L-DAA 150	147.4	97	280			
CORALIA L-DAA 220	216.4	97	285			
CORALIA L-DAB 32 *	32	90	>200			
CORALIA L-DAB 46	46.1	99	230			
CORALIA L-DAB 68	65.8	100	242			
CORALIA L-DAB 100	96.3	99	263			
CORALIA L-DAB 150	145.1	97	276			
CORALIA L-DAB 320	320.9	92	-	-9	-	Oils intended for the lubrication of air-cooled piston compressors and rotary vane compressors with drip-feed lubrication operating under medium-duty conditions.
CORALIA L-DAB 460	476.1	93	-	-6		
CORALIA VDL 32	30.8	-	175	-9		
CORALIA VDL 46	44.5	-	195	-12		
CORALIA VDL 68	64.7	-	195	-12		
CORALIA VDL 100	104.4	-	205	-9	ISO 6743-3 L-DAA, L-DAB DIN 51506 VDL	Oils intended for the lubrication of air-cooled piston compressors, screw compressors (with or without oil injection), and vane compressors (with oil injection), operating under medium-duty conditions.
CORALIA T 46	41.7	-	232	-9		
CORALIA ST 32	32.2	102	219	-37		
CORALIA ST 46	46.1	100	232	-33		
CORALIA ST 68	66.8	101	248	-28		
CORALIA PE 32	32.4	-	-	-56	ISO 6743-3 L-DAJ	Synthetic oils (based on polyalphaolefins) intended for the lubrication of rotary, vane, and screw air compressors operating under heavy-duty conditions.
CORALIA PE 46	45.2	-	-	-54		
CORALIA PE 68	62.2	-	-	-48		
CORALIA PAG 85	89.4	216	304	-46	ISO 6743-3 L-DGC	Synthetic oil based on water-insoluble polyalkylene glycols, intended for the lubrication of screw compressors compressing natural gas, LPG, and other hydrocarbon gases under heavy-duty conditions. The product is not miscible with mineral oils or other synthetic oils and must not be used to top up existing oil in such systems, nor should it be mixed in the reverse case. When switching from a previously used mineral/synthetic compressor oil to this oil, the replacement procedure must include cleaning and flushing of the compressor lubrication system.

If you have any application concerns, please contact the Oil Service Team. For contact details, see page 25 of the catalogue; e-mail: serwis@orlenoil.pl

* Product available periodically on special order

PAG – polyalkylene glycol

Product name	Kinematic viscosity at 40°C [mm²/s]	Viscosity index	Flash point, COC [°C]	Pour point [°C]	Quality class	Product description
CORALIA HC 100	101.8	-	236	-37	ISO 6743-3 L-DAA, DAG	Oils for piston and rotary air compressors, lubricated by splash or injection, intended for operation under normal and heavy-duty conditions.
CORALIA HC 150	136.4	-	248	-34		
CORALIA VACUUM 100	103.8	-	280	-10 **	-	Oil intended for use in rotary vacuum pumps.
CORALIA K-20	22.0	-	235	-5	-	SAE 60 viscosity grade oil intended for the lubrication of special-purpose medium- and high-pressure piston compressors.
CYLITEN 460 N	450.0	97	320	-8	ISO 6743-4 L-HL DIN 51506 VB, VBL	Oil classified among lubricating cylinder oils, intended for the lubrication of high-pressure compressor cylinders, valve gear components and packings of steam engines, as well as circulating systems requiring high-viscosity, emulsification-resistant oils.

** Pour point [°C]

Product name	Kinematic viscosity at 50°C [mm²/s]	Flash point, COC [°C]	Pour point [°C]	Quality class	Application
FRIGOL TZ-13	13.4	176	-48	PN-C-96072:1974 TZ-13	Oils for the lubrication of ammonia refrigeration compressors, e.g. two-stage compressors with circulating lubrication systems.
FRIGOL TZ-19	23.1	228	-34	PN-C-96072:1974 TZ-19	
FRIGOL TZ-28	29.5	230	-34	PN-C-96072:1974 TZ-28	
FRIGOL WZ	31.2 **	164	-45	PN-C-96072:1974 WZ	Oil intended for the lubrication of ammonia and carbon dioxide refrigeration compressors, where the evaporator temperature reaches as low as -45°C, e.g. single-stage, horizontal, low-speed compressors.
FRIGOL M 68	66.4 ***	202	-35	ISO 6743-3 L-DRE	

If you have any application concerns, please contact the Oil Service Team. For contact details, see page 25 of the catalogue; e-mail: serwis@orlenoil.pl

** Kinematic viscosity at 20°C

*** Kinematic viscosity at 40°C



Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point [°C]	Corrosive effect on Cu plate, 100°C/3h	Air release property of oils at 50°C [min.]	RPVOT (oxidation test) [min.]	Quality class	Approvals	Product description
TURBINEX POWER TG PREMIUM 32	857.3	31.9	115	-18	212	1	2.7	1520	DIN 51515 part 1 DIN 51515 part 2 ISO 8068	Holds: <ul style="list-style-type: none">DOOSAN Skoda Power Tp0010PSiemens TLV 901305Siemens TLV 901304 Complies with: <ul style="list-style-type: none">MAN TED 1000454696 Rev.03GEK 107395ASolar ES9-224BS 489	Turbine oils recommended for the lubrication and cooling of bearings in gas and steam turbines, and combined cycle gas turbines (CCGT) also equipped with gearboxes. These oils are designed for turbine systems operating under elevated temperatures and pressures. They may also be used as hydraulic fluids in turbine control systems and for lubrication purposes. The oils are characterised by excellent oxidation resistance and exceptionally low deposit-forming tendency.
TURBINEX POWER TG PREMIUM 46	857.3	46.6	113	-18	244	1	2.7	1447		Holds: <ul style="list-style-type: none">MAN TED 1000454696 Rev.03DOOSAN Skoda Power Tp0010PSiemens TLV 901305Siemens TLV 901304 Complies with: <ul style="list-style-type: none">GE HTGD 90117GEK 107395ASolar ES9-224BS 489	
TURBINEX TG PREMIUM 32	842.5	31.6	132	-24	244	1	2.1	>2300		Holds: <ul style="list-style-type: none">Alstom HTGD 90117Siemens TLV 901304Siemens TLV 901305DOOSAN Skoda Power Complies with: <ul style="list-style-type: none">Solar ES 9-224BS 489	
TURBINEX TG PREMIUM 46	845.6	43.6	130	-21	250	1	2.5	>2300		Holds: <ul style="list-style-type: none">GE HTGD 90117 V0001 ADSiemens TLV 901304Siemens TLV 901305 Complies with: <ul style="list-style-type: none">Solar ES9-224	
REMIZ SUPER TG 32	844.5	32.7	129	-19	235	1	1.1	>1100		Holds: <ul style="list-style-type: none">Alstom HTGD 90117Siemens TLV 901304Siemens TLV 901305 Complies with: <ul style="list-style-type: none">Solar ES9-224	
REMIZ SUPER TG 46	846.5	48.1	133	-16	254	1	2.0	>1000		Holds: <ul style="list-style-type: none">Alstom HTGD 90117Siemens TLV 901304Siemens TLV 901305 Complies with: <ul style="list-style-type: none">Solar ES9-224	
REMIZ TG 32	867.1	31.7	100	-18	218	1	1.7	>750		Holds: <ul style="list-style-type: none">Alstom HTGD 90117Siemens TLV 901304Siemens TLV 901305 Complies with: <ul style="list-style-type: none">Solar ES9-224	
REMIZ TG 46	873.2	45.4	99	-16	232	1	2.8	>750		Holds: <ul style="list-style-type: none">Alstom HTGD 90117Siemens TLV 901304 Complies with: <ul style="list-style-type: none">Solar ES9-224	
REMIZ TU 32	867.8	31.8	99	-19	224	1	1.6	>400		Holds: <ul style="list-style-type: none">Alstom HTGD 90117Siemens TLV 901304Skoda Energo	Circulating turbine oils recommended for the lubrication of steam and water turbines, as well as associated hydraulic systems and control systems, operating under varying temperature conditions.
REMIZ TU 46	873.0	45.6	98	-17	234	1	3.0	>400		Holds: <ul style="list-style-type: none">Alstom HTGD 90117Siemens TLV 901304	
REMIZ TU 68	873.8	66.0	99	-12	251	1	4.4	>400		-	

Product name	Density at 15°C [kg/m³]	Kine-matic viscosity at 40°C [mm²/s]	Kine-matic viscosity at 50°C [mm²/s]	Pour po-int [°C]	Flash po-int [°C]	Corrosi-ve effect on Cu plate, 100°C/3h	Demul-sibility number [s]	Standards	Product description
TURBINOWY T-30	871.0	51.1	-	-12	234	-	100	ISO 6743-5 L-TSA	Turbine oils for circulating lubrication of bearings in steam turbines, water turbines, and turbo-units with gearboxes in systems with a common oil circuit.
TURBINEX T-30*	876.9	49.6	30.1	-15	236	1	120	ZN-66/MPCh/NF-104	

If you have any application concerns, please contact the Oil Service Team. For contact details, see page 25 of the catalogue; e-mail: serwis@orlenoil.pl

* Product available periodically on special order

COMPLIES WITH – complies with the approval requirements
HOLDS – holds approval or certificate



Product name	Kine-matic viscosity at 100°C	Pour point [°C]	Flash point, COC [°C]	Total Base Number (TBN) [mg-KOH/g]	Structural viscosity CCS at -20°C	Sulphated ash [%(m/m)]	Approvals	Product description
DELGAS L 40	13.8	-18	272	5.4	-	0.48	Holds: - MWM TR-0199-99-2105; - INNIO Jenbacher TA 1000-1109, series 2, 3, 4 (version A and B), and 6 (version C and E), class A gases, Bergen Engines AS: engine types B35:40, C26:33 and type K, for medium-speed engines fuelled by natural gas.	Oil for use in various types of stationary, four-stroke gas engines (including Jenbacher, MWM, Bergen) primarily fuelled by natural gas. It may be used in three-way and selective catalytic converter systems.
DELGAS PREMIUM L 40 *	13.9	-18	276	4.6	-	0.53	-	Oil intended for use in various types of stationary, four-stroke naturally aspirated and turbocharged gas engines (including Jenbacher) fuelled by methane-rich gases such as landfill gas, mine gas, and biogas. It may be used in three-way and selective catalytic converter systems.
DELGAS A 15W-40	14.7	-33	230	2.0	4880	0.09	-	Ashless oil intended for use in two-stroke gas engines fuelled by natural gas, operating in gas transmission and compression stations.
DELGAS M 40	13.7	-31	274	10.5	-	0.89	-	Oil for use in various types of stationary, four-stroke naturally aspirated and turbocharged gas engines fuelled by methane-rich gases such as landfill gas, mine gas, and biogas. It may be used in three-way and selective catalytic converter systems.
DELGAS L 30 *	12.5	-27	266	6.3	-	0.5	-	Low-ash engine oil intended for the lubrication of stationary engines fuelled by natural gas and other similar pipeline fuels.
DELGAS L 10W-40 *	14.2	-39	226	6.3	5930 **	0.5	-	Medium-ash engine oil intended for the lubrication of stationary engines fuelled by lean and contaminated gases containing hydrogen sulphide and other acidic components (e.g. biogas, landfill gas).
DELGAS EXTRA 10W-40	14.1	-33	237	9	6260 **	0.86	-	

If you have any application concerns, please contact the Oil Service Team. For contact details, see page 25 of the catalogue; e-mail: serwis@orlenoil.pl

* Product available periodically on special order ** Structural viscosity measured at -25°C



SPECIALIST OIL SERVICE

ORLEN OIL was one of the first companies in the lubricants industry on the Polish market to introduce a comprehensive range of service offerings for industrial enterprises using lubricants in their production processes.

The professional oil service – POWER SERVICE – offers a wide range of services delivered directly at the User's site.

As part of the POWER SERVICE offering, the following service areas can be distinguished:

» Oil monitoring (working fluid analysis)

Regular oil analyses enable the assessment of oil condition in terms of the degree of degradation, changes in performance properties, and the presence of contaminants resulting from wear processes or from the machine's operating environment. Oil analyses provide valuable information about the condition of the machinery and enable the early detection of worn components and parts, thereby effectively preventing potential failures.

» Maintenance of industrial oil systems

The maintenance of oil systems is primarily related to the filtration of oils to achieve the required cleanliness class, complete replacement of hydraulic, gear, turbine, and other oils, as well as topping up operational fluids (so-called top-ups), and cleaning of systems and tanks.

» Application of process oils and servicing of metalworking cooling and lubricating systems

Water-based cooling and lubricating emulsions, used in metal cutting and grinding processes, require special monitoring and maintenance during operation.

» Comprehensive oil audit

Verification of equipment operating conditions to ensure correct lubricant selection. Standardisation of lubricants used within the production plant. Development of lubrication plans aimed at implementing an effective and sustainable lubrication management programme. Training and consultancy.

Oil Service Team

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Product name	API quality class	SAE viscosity class	Kinematic viscosity at 100°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point [°C]	Total base number [mgKOH/g]	Product description
IBIS RDEO 40	CF/SF/CF-4	40	14.5	102	-36	267	13.5	Engine oils of the RDEO type (Rail Diesel Engine Oil). They provide excellent lubrication for diesel locomotive engines, auxiliary marine engines, and stationary units operating under heavy-duty conditions. The oil can also be classified as meeting the requirements of LMOA Generation V.
IBIS RDEO 50	CF/SF/CF-4	50	18.5	100	-30	273	12.3	
IBIS RDEO 60	CF/SF/CF-4	60	23.6	99	-24	292	12.3	
IBIS RDEO 70 HT	CF/SF/CF-4	>60	28.4	98	-18	287	12.5	Seasonal (summer) RDEO-type engine oil (Rail Diesel Engine Oil) ensures excellent lubrication for four-stroke Diesel engines used in railway machinery. It can also be used to lubricate petrol and diesel engines in stationary power generators, technical equipment, and auxiliary marine engines operating in very high ambient temperatures and heavy-duty conditions. The oil can also be classified as meeting the requirements of LMOA Generation V.
IBIS RDEO HPD 40	CF-2/CF/CD	40	15.0	95	-15	260	13.0	The oil is designed for lubricating high-performance diesel railway engines operating under heavy-duty conditions. It may also be used for the lubrication of similar types of diesel engines in other technical equipment. Recommended for engines where the use of zinc-free oils is required. The product is approved by General Electric Generation 4 Long Life.
IBIS RDEO LA	CF	40	13.7	104	-34	270	14.0	Provides excellent lubrication for four-stroke diesel engines used in railway machinery engines, other stationary land-based engines, and auxiliary marine engines where, due to design requirements, a zinc-free engine oil is required for operation under heavy-duty conditions. The oil offers high dispersant-detergent potential and oxidation resistance.
IBIS RDEO STANDARD 40	CD	40	15.3	95	-18	250	9.0	Mineral engine oil intended for the lubrication of high-performance diesel railway engines operating under heavy-duty conditions. It may also be used for the lubrication of similar types of diesel engines in other technical equipment.

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Product name	Kinematic viscosity at 100°C	Total base number (TBN) [mg-KOH/g]	Pour point [°C]	Viscosity and quality class	Approvals	Product description
MARINOL RG 330 *	11.5	4	-15	SAE 30	Complies with: <ul style="list-style-type: none">· Pielstick· MAN B&W· MAN Augsburg· New Sulzer Diesel· Wartsila	SO-type oils (System Oil) for engines operating on light fuel. Intended for the circulating lubrication of marine crosshead engines.
MARINOL RG 350 *	18.0	4	-12	SAE 50		
MARINOL RG 630	11.5	7	-15	SAE 30		
MARINOL RG 640	14.5	7	-15	SAE 40		
MARINOL RG 650	18.5	7	-12	SAE 50		
MARINOL RG 1030 *	11.5	11	-15	SAE 30		
MARINOL RG 1040	14.5	11	-15	SAE 40		
MARINOL RG 1230	11.5	13	-15	SAE 30, API CF		
MARINOL RG 1240	14.5	13	-15	SAE 40, API CF		
MARINOL RG 1530	11.5	16	-15	SAE 30, API CF		
MARINOL RG 1540	15.0	16	-15	SAE 40, API CF	Complies with: <ul style="list-style-type: none">· Pielstick· MAN B&W· MAN Augsburg· New Sulzer Diesel· Wartsila	TPEO-type oils (Trunk Piston Engine Oil), intended for the lubrication of marine trunk piston engines operating on light fuel.
MARINOL RG 2030	11.5	21	-15	SAE 30, API CF		
MARINOL RG 2040	14.5	21	-15	SAE 40, API CF		
MARINOL RG 2050	22.0	21	-12	SAE 50, API CF		
MARINOL RG 2550*	19.5	25	-18	SAE 50		
MARINOL RG 3030	11.5	32	-15	SAE 30, API CF		
MARINOL RG 3040	14.2	32	-15	SAE 40, API CF		
MARINOL RG 4030 *	11.7	40	-15	SAE 30, API CF		
MARINOL RG 4040	14.5	40	-12	SAE 40, API CF		
MARINOL RG 4050	19.5	40	-27	SAE 50		
MARINOL RG 7050	19.2	70	-27	SAE 50	Holds: <ul style="list-style-type: none">· WinGD, MAN Complies with: <ul style="list-style-type: none">· Pielstick· New Sulzer Diesel	
MARINOL RG 8550 *	20.0	87	-27	SAE 50		
MARINOL RG 10050 *	19.5	100	-	SAE 50		
MARINOL RG 14050 *	19.5	140	-24	SAE 50		
MARINOL MW 50	21.0	4.0	-18	SAE 50	Complies with: <ul style="list-style-type: none">· WinGD· MAN· Pielstick· New Sulzer Diesel	Oil intended for the lubrication of high-speed marine diesel engines operating on light fuel. Provides proper lubrication of the engine's cylinder and crankshaft systems.
MARINE OIL SC-22	22.0	-	-5	SAE 60		Engine oil intended for the lubrication of cylinders in high-power marine engines.

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* Product available periodically on special order

COMPLIES WITH – complies with the approval requirements **HOLDS** – holds approval



Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Kinematic viscosity at 100°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point [°C]	Quality class	Approval / Standard	Product description
VELOL P 150	878.1	152.9	15.5	102	-33	280	DIN 51502 C	Complies with: - DIN 51517-1 C - DIN 51517-2 CL	Circulating oils characterised by excellent oxidation resistance and good water separability. The products are compatible with SRE-NBR 28/SX type seals and are used in circulating systems of machinery, low and medium loaded enclosed gearboxes, and lightly loaded piston, rotary, and vane air compressors.
VELOL P 220	885.6	228.9	19.9	101	-27	284	-	-	Oils for hydrodynamic bearings in large metallurgical units used in the sheet rolling process. Additionally, they can be used as high-quality, non-emulsifying, fortified machine oils. The products meet the basic MORGOL requirements.
VELOL M 100	890.0	98.9	11.2	99	-24	258	ISO 6743-13 GB DIN 51502 CG	Complies with: - Fives Cincinnati P-53	Oils for all types of slideways, particularly for the lubrication of horizontal slideways operating at moderate temperatures and under moderate to medium loads. They ensure proper operation of the slideways with particular emphasis on optimal friction characteristics and the elimination of "stick-slip" phenomena.
VELOL M 220	897.0	217.2	18.3	92	-15	250			
VELOL M 320	900.0	327.6	24.3	95	-21	290			
VELOL M 460	902.0	475.0	30.6	93	-15	315			
VELOL RC 32	875.7	32.9	-	101	-21	215			
VELOL RC 46	881.9	47.2	-	101	-18	217	ISO 6743-1 AN	Complies with: - Fives Cincinnati P-47	Machine oils for through-feed and bath lubrication of high-speed components in textile machinery, machine tools, and other precision machine elements in accordance with lubrication instructions. They can also be used for the mechanical processing of metals such as steel and brass, for operations like turning, milling, and threading.
VELOL RC 68	874.5	71.5	-	>95	-21	>220			
VELOL RC 100	887.9	98.4	-	98	-15	243			
VELOL RC 220	889.6	221.5	-	>95	-12	>230			
VELOL RC 320	900.4	315.3	-	92	-12	255			
VELOL 9Q	844.2	10.0 **	-	-	-44	146	-	Complies with: - Fives Cincinnati P-50	Oil intended for the lubrication of cylinders, valve gear components, and packings of steam engines, circulating lubrication of bearings, and wherever high anti-wear properties are not required.
VELOL 19	856.6	20.2 **	-	-	-43	168			
VELOL SM-30	900.7	459.2	30.1	94	-15	312			
VELOL 8	866.9	12.2	-	100	-12	176			
VELOL 10	864.2	21.1	-	100	-27	196			
VELOL 15	874.3	31.5	-	102	-24	222	-		Oils used for lightly and moderately loaded rotating machine components such as rolling and plain bearings, slideways, or spindles. They can also be used in the cleaning and flushing of mechanical machine components and tanks.
VELOL 20	879.2	45.4	-	99	-15	222			
VELOL 50	888.1	99.3	-	91	-24	264			
VELOL 60	891.9	115.6	-	93	-15	232			

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** Kinematic viscosity at 20°C



Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Kinematic viscosity at 100°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point [°C]	Quality class	Approval / Standard	Product description
L-AN 10	853.4	10.3	2.7	101	-18	154	ISO 6743-1 AN DIN 51502 AN	Complies with: - DIN 51501	Machine oils intended for lightly or moderately loaded working components of industrial machinery and equipment, such as rolling and plain bearings, slideways, mechanical gearboxes, spindles, and auxiliary friction nodes.
L-AN 15	850.4	16.2	3.6	110	-15	172			
L-AN 22	863.2	21.1	4.2	99	-15	210			
L-AN 32	873.1	36.3	5.7	96	-18	224			
L-AN 46	879.4	45.4	6.6	98	-12	225			
L-AN 55	883.0	58.1	-	97	-9	244			
L-AN 68	874.5	66.4	8.4	97	-9	240			
L-AN 100	876.6	98.4	10.9	95	-9	258			
L-AN 150	883.0	145.1	13.8	90	-9	276			
L-AN 10Z	879.0	10.5	-	100	-40	158			
L-AN 22Z	870.0	22.0	-	90	-42	199			
L-AN 15Z	853.8	15.8	-	-	-33	-			
L-AN 46Z	880.8	48.1	-	-	-30	-			
L-AN 68Z	885.5	66.2	-	-	-24	-			
L-AN 320Z	899.6	328.5	-	-	-18	281			

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**Kinematic viscosity at 20°C

Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 50°C [mm²/s]	Kinematic viscosity at 100°C [mm²/s]	Pour point [°C]	Flash point [°C]	Acid number [mg KOH/g]	Standard	Product description
COMPOUNDED MACHINE OIL MN-11	896.0	82.2	-	-13	292	0.15	PN-56/C-96074	Compounded machine oils are a blend of mineral oils and oxidised vegetable oil. They are used for the lubrication of: bearings of steam engines in marine applications, bearings exposed to contact with water, with which compounded machine oils form stable lubricating emulsions, and bearings of machines subjected to higher unit loads.
COMPOUNDED MACHINE OIL MN-15 *	898.4	111.2	-	-13	286	0.02		
CYLINDER OIL CL-17 (PN-240)	893.4	-	22.7	-9	>240	-	PN-61/C-96095 DIN 51519, DIN 51510 for oil class ZB	Oils intended for the lubrication of cylinders, valve gear components and packings of steam engines, circulating systems requiring high-viscosity, non-emulsifying machine oils, mechanical gearboxes, and other highly loaded systems requiring oil with high adhesiveness and water resistance. Cylinder oils are used in steam machinery systems operating with saturated steam at the following temperatures: - up to 250°C - cylinder oil CL-17 (PN-240) - up to 290°C - cylinder oil CL-30 (PP-280) - up to 310°C - cylinder oil CL-40 (PW-300)
CYLINDER OIL CL-30 (PP-280)	901.2	-	39.7	-9	>280	-		
CYLINDER OIL CL-40 (PW-300)	902.0	-	55.0	-9	>300	-	DIN 51519, DIN 51510 for oil class ZB	Cylinder oil intended for the lubrication of slideways and cylinders of steam engines, and other systems where contact with high-temperature steam is possible, high-pressure compressor cylinders, valve gear components and packings of steam engines, and other applications requiring a high-viscosity oil.
CYLINDER OIL CL-1500	903.0	1472.0 **	-	-	330	-		
CYLINDER OIL P 28	904.0	-	29.4	-6	308	-	-	Cylinder oils are intended for the lubrication of cylinders, valve gear components, and packings of steam engines. The primary function of these oils is to prevent wear of rings and cylinders, and to seal working areas operating at high temperatures and in the presence of steam.
CYLINDER OIL B 28 *	902.8	-	31.3	-6	325	-		
U AXLE OIL	874.4	44.0	-	-23	246	-	PN-61/C-96097	Oil primarily intended for the lubrication of plain bearings in steam locomotives, railway carriages, and trams.

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* Product available periodically on special order

** Kinematic viscosity at 40°C



Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Kinematic viscosity at 100°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point [°C]	Quality class	Product description
GRAFITOL	900	545.0	34.0	-	-12	325	ISO 6743-1 L-AN DIN 51502 AN	Process oil used mainly in the production of printing inks and as a component in rubber compounds. It is also used as an anti-adhesive agent in the processing of mineral wool and in other non-standard applications requiring a technologically pure, high-viscosity process oil.
KVG 68 OIL	874	68.5	8.7	99	-15	255	ISO 6743-1 L-AN DIN 51502 AN DIN 51517 CL	Mineral process oils intended for various technological processes such as the production of plasticisers, rubber compounds, resin viscosity modifiers, and as a component in adhesives. They are also used as lubricants and in unconventional industrial applications. KVG 150 Z oil additionally features a reduced pour point - enabling operation at lower temperatures. KVG 460 oil is used in the production of thermal insulation and other specific applications.
KVG 100 OIL	875	98.0	11.2	99	-12	272		
KVG 150 OIL	883	151.5	14.9	97	-14	285		
KVG 150 Z OIL *	884	153.6	15.0	98	-25	275		
KVG 460 OIL	898	453.1	-	95	-6	315		
KVG 220 OIL	890	218.6	19.0	98	-18	270	ISO VG 220 ISO L-CKC DIN 51517 part 3 CLP	This oil is used for the lubrication of lightly loaded components of industrial machinery (bearings, slideways, mechanical gearboxes, etc.) as well as in other specialised industrial processes. The oil may be used in enclosed gearboxes, gear cases, and other highly loaded systems requiring an oil with enhanced load-carrying film strength. The oil should always be tested prior to final application to verify suitability for the specific use.
KVG 1000 OIL *	-	1000.0	-	-	-	230	ISO 6743-1 L-AN DIN 51502 AN DIN 51517 CL	Mineral process oil mainly used as a raw material in the production of rubber compounds.
VASELINE OIL 17	850	16.5	-	-	-6	198	ISO 6743-1 L-AN ISO 6743-2 L-FC DIN 51502 AN DIN 51517 CL	Oil intended for the lubrication of precision machinery and equipment (bearings, slideways, mechanical gearboxes, spindles, etc.), high-speed bearings (spindle bearings), and auxiliary friction nodes.
PROCESS OIL GDB 6	880	125.0	13.5	99	-9	286	ISO L-AN	GDB process oils are used in various branches of industry as a component in the production of industrial oils or as an auxiliary product in processing operations. They are applied in a variety of technological processes, providing corrosion protection, good adhesion to lubricated components, suitable temperature characteristics, and improvement of the final product quality.
GDB 500 PROCESS OIL	875	87.5	10.5	100	-10	277		
GDB 500 ZLF PROCESS OIL	877	97.0	11.2	99	-9	280		
GDB 150 ZLF PROCESS OIL	868	31.1	5.2	100	-15	230	ISO L-AN	Process oils intended for the lubrication of lightly loaded components of industrial machinery and other specialised applications. Used in various industrial sectors as a product component, an industrial oil component, or as an auxiliary product in processing operations.
P-90 PROCESS OIL	875	86.0	10.4	102	-9	270		
P-600 PROCESS OIL	900	521.0	33.0	96	-6	320		

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* Product available periodically on special order

Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Flash point [°C]	Acid number [mg KOH/g]	Quality class	Application method	Product description
KONKRETON BIO-BIT	884.7	10.7	-	-	ISO 6743 B	· spray · roller	Low-viscosity, biodegradable release oil intended for the lubrication of moulds made of steel, aluminium, plastics, and wood, used in the production of precast concrete elements and other concrete components. The product also provides short-term corrosion protection for steel moulds.
KONKRETON V	842.7	4.7	146	6.1	ISO 6743 B	· spray	Release oil intended for the lubrication of moulds used in the production of precast concrete elements and other concrete components. The product can be used for the lubrication of cold metal and plastic moulds.
KONKRETON VS	849.4	5.7	115	6.2	ISO 6743 B	· spray	Release oil intended for the lubrication of moulds used in the production of precast concrete elements and other concrete components. The product can be used for the lubrication of cold moulds.
KONKRETON L	866.5	21.8	222	3.3	ISO 6743 B	· spray	Release oil intended for the lubrication of cold moulds used in the production of concrete elements and lightweight aerated concrete blocks.
KONKRETON M	863.7	23.9	206	1.4	ISO 6743 B	· spray	Release oil intended for the lubrication of cold moulds used in the production of concrete elements and lightweight aerated concrete blocks. Contains additives that improve adhesion to the mould walls.
KONKRETON L PLUS	878.5	76.5	260	2.9	ISO 6743 B	· brush	Oil intended for mould lubrication as a release agent in the production of aerated concrete. The oil ensures easy release of the product and protects the mould against corrosion.
KONKRETON N	878.2	38.8	228	3.1	ISO 6743 B	· spray	Release oil intended for the lubrication of moulds used in the production of concrete elements and lightweight aerated concrete blocks. These oils can be applied by spray method to cold moulds during aerated concrete production.
KONKRETON P	887.4	79.8	254	3.2	ISO 6743 B	· brush	Release oil intended for the lubrication of moulds used in the production of concrete elements and lightweight aerated concrete blocks.
KONKRETON S	891.1	112.5	278	3.3	ISO 6743 B	· spray · roller	Release oils intended for the lubrication of moulds used in the production of aerated concrete blocks, where an increased thickness of the separating layer is required. Thanks to their carefully selected properties, these products can be used year-round in the production process.
KONKRETON XS	894.4	156.1	280	3.0	ISO 6743 B	· spray	Release oil intended for the lubrication of moulds used in the production of lightweight aerated concrete blocks, concrete rings, concrete fences, and precast concrete elements of various sizes.
KONKRETON AZ	845.5	9.4	156	3.2	ISO 6743 B	· spray · brush	Release oil intended for the lubrication of moulds used in the production of lightweight aerated concrete blocks, concrete rings, concrete fences, and precast concrete elements of various sizes.
KONKRETON MK S-E	874.6	7.2	142	6.7	ISO 6743 B	· spray	Low-viscosity release oils intended for the lubrication of moulds made of steel, aluminium, plastics, and wood, used in the production of precast concrete and ceramic elements.
KONKRETON MK S-L *	863.5	6.2	150	6.4	ISO 6743 B	· brush · roller	
KONKRETON SEPAR	864.3	5.5	142	13.4	ISO 6743 B		
KONKRETON 30 *	867.8	6.8	146	74	ISO 6743 B		
RELEASE OIL B-0	864.1	17.5	184	6.0	ISO 6743 B	· spray · brush	Release oil intended for the lubrication of large-surface steel moulds operating under high unit pressures.
FORMEX Q	847.8	12.5 **	110	5.9	ISO 6743 B	· spray · brush · roller	Release oil intended for the lubrication of steel moulds used in the production of precast concrete and reinforced concrete elements, as well as for steel and wooden formwork in construction.
FORMEX XS	829.5	1.4 **	82	>0.5	ISO 6743 B	· spray · brush	Oil intended for mould lubrication as a release agent in the production of aerated concrete. The oil ensures easy release of the product and protects the mould against corrosion.
CERAMOL Q	835.8	4.3 **	100	5.4	ISO 6743 B	· spray · brush · roller	Oil used in the production of stoneware, semi-porcelain, and electro-technical porcelain products.
CERAMOL B	839.2	11.3 **	75	5.2	ISO 6743 B	· spray · brush · roller	Release oil used in the ceramics industry in the production of stoneware, semi-porcelain, and electro-technical porcelain products as a component of the ceramic mass. The product is used to improve demoulding of the manufactured products, to prevent adhesion of the mass to the moulds, and to protect the moulds against corrosion.
OIL FOR CERAMICS BQ	835.2	4.3 **	100	6.2	ISO 6743 B	· spray · brush · roller	Release oil used in the production of ceramic products. The product is used in the production of stoneware, semi-porcelain, and electro-technical porcelain products as a component of the kaolin mass.
SEPARATION OIL	881.9	30.3	202	-	-	· spray · brush	Separation oil intended for the preparation of water-oil emulsions used to eliminate the adhesion of asphalt mass to the metal surfaces of asphalt transport vehicles, paving machines, and rollers.
VIAL FORMING OIL A VG-32	873.5	30.5	215	-	-	· spray · brush · roller	Vial forming oil is produced on the basis of deeply refined mineral oil with the addition of performance and dispersant-detergent additives. The product can be used in the hot forming process of plastic glass mass.

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*Product available periodically on special order** Kinematic viscosity at 20°C [mm²/s]

Emulsifiable Metalworking Oils



Emulsifiable Metalworking Oils



Product name	Kinematic viscosity of the concentrate at 40°C [mm²/s]	Appearance of the emulsion at 20°C	pH of 5% emulsion	Corrosion protection on steel plates - Herbert method	Emulsion stability over 24h/20±50°C	Refractometric factor at 20°C	Water hardness [°n]	►	►	Machined material	Recommended working concentrations	Product description		
UNICOOL MIKRO EP	65.0	Clear to opalescent emulsion	9.2	H0	passes	1.4	10 °n to 20 °n	►	►	<ul style="list-style-type: none"> · steel · cast iron · non-ferrous metals · very hard materials, e.g. alloy steels 	<ul style="list-style-type: none"> · heavy grinding: 3-5% · heavy machining (turning, milling): 3-5% · very heavy machining (reaming, threading): 5-8% 	Semi-synthetic emulsifying concentrate (microemulsion) with EP additives, used for heavy-duty metal cutting operations and grinding of steel, cast iron, non-ferrous metals, or when machining very hard materials such as alloy steels, Nimonic alloys.		
UNICOOL MIKRO E	1.0	Clear to opalescent emulsion	9.4	H0	passes	2.5	10 °n to 20 °n			<ul style="list-style-type: none"> · cast iron · iron alloys and stainless steel · aluminium alloys · plastic materials 		Semi-synthetic emulsifying concentrate (microemulsion), used for typical machining processes: turning, milling, drilling, reaming, threading, forming, grinding. Suitable for both low- and high-pressure CNC systems. It can be used in central systems as well as in individual machines.		
UNICOOL MIKRO 40 P	15.8	Clear to opalescent emulsion	9.4	H0	passes	2.3	10 °n to 15 °n			<ul style="list-style-type: none"> · cast iron · iron alloys and stainless steel · aluminium alloys · plastic materials 	<ul style="list-style-type: none"> · normal machining (turning, milling): light (3%), medium-heavy (5-6%) · grinding: light (1.5-2%), medium-heavy (3-5%) · stamping, forming: light (3-4%), medium-heavy (5-6%) · reaming: light (4-5%), medium-heavy (8-10%) 	Semi-synthetic emulsifying concentrate (microemulsion), used for typical machining processes: turning, milling, forming, grinding. Suitable for both low- and high-pressure CNC systems. It can be used in central systems as well as in individual machines.		
UNICOOL MIKRO 40 PS	5.6	Clear to opalescent emulsion	9.4	H0	passes	1.9	10 °n to 15 °n			<ul style="list-style-type: none"> · iron alloys and stainless steel · cast iron · copper and aluminium alloys · plastic materials 		Semi-synthetic emulsifying concentrate (microemulsion), used for typical machining processes: turning, milling, drilling, reaming, deep hole drilling, threading, forming, grinding. Provides very good corrosion protection for components made of steel and non-ferrous metals. Suitable for both low- and high-pressure CNC systems. It can be used in central systems as well as in individual machines.		
UNICOOL MIKRO 40 PW	15.8	Clear to opalescent emulsion	9.4	H0	passes	2.3	10 °n to 15 °n			<ul style="list-style-type: none"> · cast iron · iron alloys and stainless steel · aluminium alloys · plastic materials 	<ul style="list-style-type: none"> · normal machining (turning, milling): light machining (3%), medium (5-6%), heavy (7-8%) · grinding: light machining (1.5-2%), medium (3-5%), heavy (3-5%) · heavy machining (threading, deep hole drilling): light machining (3-4%), medium (6-8%), heavy (9%) · stamping, forming: light machining (3-4%), medium (5-6%), heavy (6-8%) · reaming: light machining (4-5%), medium (8-10%), heavy (10-12%) 	Semi-synthetic emulsifying concentrate (microemulsion) with enhanced lubricating properties, used for typical machining processes: turning, milling, drilling, reaming, deep hole drilling, threading, forming, grinding. Suitable for both low- and high-pressure CNC systems. It can be used in central systems as well as in individual machines.		
UNICOOL AL.	54.0	Semi-transparent to milky emulsion	9.0	H0	passes	1.1	< 10 °n			<ul style="list-style-type: none"> · aluminium · copper and aluminium alloys · steel alloys 	<ul style="list-style-type: none"> · grinding: (3-5%) · rough turning: (3-5%) · finish turning, finish reaming, threading: (5-8%) · extrusion: (8-20%) 	Semi-synthetic emulsifying concentrate (microemulsion) for universal use in metal machining operations. Suitable for both low- and high-pressure CNC systems. It can be used in central systems as well as in individual machines.		
UNICOOL WO	29.0	Milky emulsion	9.2	H0	passes	1.5	10 °n to 15 °n			<ul style="list-style-type: none"> · steel · cast iron · non-ferrous metals and their alloys 	<p>For water with general hardness up to 15°n:</p> <ul style="list-style-type: none"> · grinding: (3-4%) · normal machining (e.g. turning, milling): (4-8%) · heavy machining (e.g. threading): (8-10%, up to 15% for very heavy-duty operations) 	Cooling and lubricating mineral emulsifying concentrate (milky emulsion) used for various types of machining operations.		
UNICOOL WO PRO	68.0	Milky emulsion	9.6	H0	passes	1.0	10°n to 25°n			<ul style="list-style-type: none"> · steel · cast iron · non-ferrous metals and their alloys · copper and aluminium alloys 	<p>For water with general hardness up to 15°n:</p> <ul style="list-style-type: none"> · turning, milling: (5-8%) · grinding: (3-5%) · threading: (10-12%) · plastic forming: (5-12%) 	Cooling and lubricating mineral emulsifying concentrate (milky emulsion) used for various types of metal and alloy machining operations, for heavy-duty operations requiring enhanced lubricating properties.		
UNICOOL WO PRO MW	69.0	Milky emulsion	9.7	H0	passes	1.0				<ul style="list-style-type: none"> · steel · cast iron · aluminium alloys · non-ferrous metals and their alloys · copper alloys 		Cooling and lubricating mineral emulsifying concentrate (milky emulsion) used for various types of metal and alloy machining operations, particularly aluminium alloys, in heavy-duty operations requiring enhanced lubricating properties.		
EMULGOL DS 30	28.5	Milky emulsion	9.2	H0	passes	1.5	10 °n to 15 °n			<ul style="list-style-type: none"> · steel · cast iron · non-ferrous metals and their alloys · copper and aluminium alloys 	<p>For water with general hardness up to 15°n:</p> <ul style="list-style-type: none"> · grinding: (3-5%) · turning, milling, drilling, reaming: (5-10%) · threading: (10-15%) 	Cooling and lubricating mineral emulsifying concentrate (milky emulsion) used for various types of machining operations.		
EMULGOL ES-12	30.5	Milky emulsion	9.1	H0	passes	1.4				<ul style="list-style-type: none"> · steel · cast iron · non-ferrous metals and their alloys · copper and aluminium alloys 		Cooling and lubricating mineral emulsifying concentrate (milky emulsion) used for various types of machining operations.		

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Product name	Density at 15°C [g/cm³]	Kinematic viscosity at 40°C [mm²/s]	Pour point °C	Flash point °C	Weld load [kg]	Machining processes	Product description
ACP-1E	0.86	16.7	-3	148	-	<ul style="list-style-type: none"> profile turning of steel, cast iron, and copper and aluminium alloys gear cutting by slotting reaming with multi-blade reamers thread cutting 	<p>Cutting oils for machining steel, cast iron, copper, and aluminium alloys under high unit pressures and high cutting speeds. ACP series E cutting oils are chlorine-free, non-emulsifying metalworking oils enriched with lubricity additives for a wide range of applications.</p>
ACP-2E	0.87	21.3	-15	153	-	<ul style="list-style-type: none"> peripheral milling steel reaming with multi-blade reamer thread cutting rolling shaving broaching and push broaching 	
ACP-3E	0.87	26.5	-1	159	-	<ul style="list-style-type: none"> deep hole drilling automatic machining 	
ACP-1L	0.86	26.0	-24	225	-	<ul style="list-style-type: none"> profile turning of steel, cast iron, and copper alloys gear cutting by slotting reaming with multi-blade reamers thread cutting 	<p>Cutting oils for machining steel, cast iron, copper, and aluminium alloys under high unit pressures and high cutting speeds. ACP series L cutting oils are chlorine-free, non-emulsifying metalworking oils enriched with vegetable-based and polar lubricity additives.</p>
ACP-2L	0.87	33.0	-21	230	-	<ul style="list-style-type: none"> peripheral milling steel reaming with multi-blade reamer thread cutting rolling shaving broaching and push broaching 	
FREZOL HC 800	0.90	22.8	-21	172	620	<ul style="list-style-type: none"> milling (e.g. gears) turning threading reaming shaving slotting and broaching 	Next-generation metalworking oils for use in heavy-duty metalworking operations where a non-emulsifying oil with very high lubricating film strength and excellent anti-wear properties is required.
FREZOL HC 2200 *	-	25.0	-	-	700		
FREZOL WS 8	0.88	8.0	-	125	-	<ul style="list-style-type: none"> honing grinding lapping 	Oil for machining steel, non-ferrous metals, and carbides during heavy and medium-heavy metalworking operations. The oil is designed for processes where rapid heat dissipation from the cutting zone is required while maintaining appropriate lubricating film strength.
FREZOL WRA 32	0.86	28.0	-21	220	-	<ul style="list-style-type: none"> turning cutting milling upsetting stamping 	High-quality oil for machining and plastic working of ferrous and non-ferrous alloys, particularly for demanding plastic forming operations on aluminium alloys. The oil contains thermally and oxidatively stabilised synthetic lubricity and anti-wear additives.
FREZOL EPX 22 *	0.89	23.0	-15	170	450		<p>Cutting oils for machining difficult-to-machine steels, stainless steels, and acid-resistant steels, where the use of a non-emulsifying oil with high lubricating film strength is required.</p>
FREZOL EPX 32	0.89	31.5	-12	230	500		
FREZOL EPX 46 *	0.89	44.5	-12	240	500		
FREZOL EP 5	0.87	5.2	-	120	-	<ul style="list-style-type: none"> grinding profile grinding 	Oil for metalworking in high-speed grinding and profile grinding operations on heat-treated alloy steel components.
FREZOL EP 32 *	0.89	33.2	-	205	-	<ul style="list-style-type: none"> turning broaching milling slotting 	Metalworking oil for processes requiring a non-emulsifying oil with high lubricating film strength. Recommended for machining difficult-to-machine steels such as stainless and acid-resistant steels.
FREZOL 22	0.87	22.0	-	-	200	<ul style="list-style-type: none"> milling (e.g. gears) turning threading 	Metalworking oils for light and medium-duty machining operations on copper and its alloys, as well as ferrous and non-ferrous metals.
FREZOL 32	0.88	30.0	-	-	200		
FREZOL C 3280	0.90	55.0	-	-	>800		Non-emulsifying concentrate for heavy-duty metal cutting operations, designed as an EP booster in an amount of at least 10% to the oil used in the system. Ensures improved EP properties of the system, which in turn facilitates the machining of difficult-to-machine components.

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* Product available periodically on special order

Non-Emulsifiable Metalworking Oils



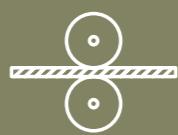
Non-Emulsifiable Metalworking Oils



Product name	Density at 15°C [g/cm³]	Kinematic viscosity at 40°C [mm²/s]	Pour point °C	Flash point °C	Weld load [kg]	Machining processes	Product description
FREZOL CUT 3	0.84	4.5	-66	134	-	· grinding · metal honing	Metalworking oil for specific finishing operations on ferrous metals, as well as for machining of steel and aluminium alloys.
FREZOL CUT 25	0.88	22.8	-	180	620		Metalworking oil for cutting operations used in high-performance grinding processes and in machining with tools of precisely defined geometry at low and medium cutting speeds. Suitable for machining steel and non-ferrous metals. The product is not intended for machining copper and its alloys.
FREZOL CUT 25 A *	0.88	23.0	-12	198	-	· grinding · turning · milling · drilling · threading	Metalworking oil for cutting operations used in high-performance grinding processes and in machining with tools of precisely defined geometry at low and medium cutting speeds. The product is not intended for machining copper and its alloys.
FREZOL CUT 32	0.88	34.4	-12	224	-		Metalworking oil with wide-ranging applications, suitable both for operations with tools of precisely defined geometry and for grinding. Suitable for machining steel, non-ferrous metals and yellow metals. May be used as a multifunctional circulating oil.
FREZOL CUT 32 A	0.88	32.0	-12	224	-		Metalworking oil with wide-ranging applications, suitable both for operations with tools of precisely defined geometry and for grinding. Suitable for machining steel and non-ferrous metals. The product is not intended for machining copper and its alloys. May be used as a multifunctional circulating oil.
FREZOL CUT OC *	0.88	15.8	-12	185	-	· turning · milling · drilling (including deep hole drilling) · internal threading and external grinding	Metalworking oil for processes involving tools with precisely defined cutting-edge geometry. Recommended even for machining materials with very poor machinability.
FREZOL CUT OC MULTI	0.88	16.0	-12	180	800		
FREZOL CUT EC AL	0.87	12.5	-57	176	-	· turning · milling · drilling · reaming	Metal cutting oil designed primarily for NC and CNC machining centres and for machining non-ferrous metals and their alloys. Provides excellent cutting and cooling performance.
FREZOL UNICUT 22 *	0.88	24.8	-15	200	-	· milling · turning · internal and external threading · drilling (including deep hole drilling)	Metalworking oils for processes with precisely defined tool cutting-edge geometry. Recommended even for machining materials with very poor machinability and for complex machining operations performed during gear manufacturing. Not suitable for machining non-ferrous metals.
FREZOL UNICUT 32 *	0.89	36.7	-12	202	-		
SULFOFREZOL 22	0.87	22.0	-16	162	-	· drilling · turning · threading · milling · slotting	Metal cutting oil with the addition of a depressant and sulphurised mineral oils, used for machining steel and cast iron at high cutting speeds and elevated cutting-edge temperatures, as well as for machining high-strength steels and heat-resistant steels. Not recommended for machining non-ferrous metals or in applications where a high surface finish quality of the machined material is required. Active sulphur content: 0.40% (m/m).
SULFOFREZOL 36	0.87	36.0	-15	215	-		Metal cutting oil with the addition of sulphurised mineral oils, used for machining steel and cast iron at high cutting speeds and elevated cutting-edge temperatures, as well as for machining high-strength steels and heat-resistant steels. Not recommended for machining non-ferrous metals, especially copper and its alloys.
METALWORKING OIL SM	0.87	23.3	-6	180	-	· machining · broaching · threading	Compounded metal cutting oil for machining ferrous alloys and non-ferrous metals at low cutting speeds and cutting-edge temperatures up to 120°C.
MILTRON AM 46	0.88	43.5	-18	220	250	· drilling · turning · threading	Multifunctional cutting and circulating oil designed for lubrication and cooling of tools during steel cutting operations. Performs the functions of a circulating oil, and its innovative technology also allows safe use in the hydraulic and gear systems of machining equipment.
LAPENOMIL LLE	0.84	8.0	-	170	-	· honing · lapping · grinding	Metalworking oil for honing, lapping, grinding, final surface finishing of ferrous and light metals, as well as for machining of ferrous and non-ferrous alloys.

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*Product available periodically on special order



Product name	Density at 15°C [g/cm³]	Kinematic viscosity at 40°C [mm²/s]	Flash point, COC [°C]	Lubricating properties - weld load [kG]	Product description
PRESSOL PT 1	0.78	1.2	52	-	Evaporation liquid intended for pressing varnished steel sheets in the production of roofing. The surface of the sheet metal after treatment does not require degreasing or other cleaning operations. The product can be applied to the sheet metal surface with a brush, roller or by spraying.
PRESSOL M	0.80	1.4	64	-	Evaporating liquid for stamping, punching, profiling and perforating aluminium and steel sheets. Does not colour the treated surfaces. The product can be applied to the sheet metal surface with a brush, roller or by spraying.
PRESSOL WK *	0.90	86.0	214	800	Lubricating and cooling oil for plastic forming, recommended for precision extrusion and rolling processes. The product contains refining additives which provide increased strength of the lubricating film, improved anticorrosion properties and facilitate the process of washing workpieces after machining.
PRESSOL ST	-	205.0	-	800	Oil for extrusion and hollowing in the cold forming process using all types of stamping presses. Recommended for all types of materials, including aluminium and copper.
DEEP-DRAWING OIL	0.91	330.0	240	620	Forming oil used for the drawing of components with complex geometries and sharp curvatures, requiring very high pressures, e.g. in the drawing of bathtubs, sinks made from cold-rolled steel sheet, high-alloy and stainless steel.
OP-35 PLASTIC FORMING OIL	0.90	84.0	222	500	Plastic forming oil for use as a cooling lubricant in the cold forging process. Product based on sulphurised mineral oil and additives with antioxidant and anticorrosive properties.

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* Product available periodically on special order

Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 20°C [mm²/s]	Kinematic viscosity at 40°C [mm²/s]	Pour point [°C]	Flash point [°C]	Protective properties	Product description
AKORINOL LT	826.0	4.5	-	-	75	Corrosion test on steel plates (96h, 50°C) – resistant	Oil for cleaning metal products, including rolling bearing components, and for inter-operational anti-corrosion protection.
AKORINOL L-5Q	835.5	5.2	3.2	-15	92	-	Oil recommended for cleaning metal products and inter-operational corrosion protection. In addition, the product washes off and dissolves grease soiling.
ANTYKOL 101 *	872.1	-	10.8	-	174	Corrosion with inorganic salt exposure – after 24 h – resistant	Maintenance oil recommended for temporary protection against atmospheric corrosion of components made of ferrous and non-ferrous metals. The product can be used for the maintenance and lubrication of weapons, machinery, precision mechanisms and spare parts. As it is compatible with fuel fractions and forms a thin oil film, it can serve as a preservative for engines and injection pumps.
ANTYKOL M *	881.0	-	88.0	-25	266	Corrosion with inorganic salt exposure – after 12 h – resistant	Protective oil M is intended for temporary protection of metal surfaces and steel elements of gears, hydraulic and precision devices, etc., except for combustion engines and roller bearings. The oil is not recommended as an anti-corrosion agent for sea transport.
ANTYKOL 100 S	891.7	-	105.9	-26	204	Corrosion with inorganic salt exposure – after 24 h – resistant	Maintenance oil for corrosion protection of internal surfaces of combustion engines, air compressors and engine pumps.
ANTYKOL LT *	881.0	-	116.0	-24	270	Corrosion with inorganic salt exposure – after 12 h – resistant	Oil for long-term corrosion protection. Not recommended for components transported by sea.
ANTYKOL TS-120	900.7	120,0 **	211.8	-	220	-	Protective oil for self-lubricating sintered powder bushings and plain bearing running surfaces.

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*Product available periodically on special order ** Kinematic viscosity at 50°C [mm²/s]



Product name	Kinematic viscosity at 40°C [mm²/s]	Flash point (COC) min. [°C]	Flash point min. [°C]	Pour point [°C]	Cooling rate [C/s]	Incineration residue [%]	Acid number [mg KOH/g]	Recommended oil bath temperatures	Product description
HARTEX 70	22.0	180	160	-15	96	-	0.1	40-80°C	Low-temperature quenching oil for the heat treatment of cast iron, alloy steel and carburised steel elements, especially in closed furnaces with a controlled atmosphere, where a high surface cleanliness of the workpieces is required. The product also works well in through-feed lubrication.
									Low-temperature quenching oil for the heat treatment of cast iron and steel elements, especially in closed furnaces with a controlled atmosphere, where a high surface cleanliness of the workpieces is required.
									Medium-temperature quenching oil for the heat treatment of cast iron and steel elements, especially in closed furnaces with controlled atmosphere, where a high surface cleanliness of the workpieces is required.
HARTEX 120	45.0	220	200	-12	89	-	-	110-130°C	Low-temperature quenching oil for the heat treatment of cast iron and steel elements, especially in closed furnaces with controlled atmosphere, where a high surface cleanliness of the workpieces is required.
HARTEX WZ	31.5 **	145	-	-	-	0.20	0.05	40-80°C	Low-temperature quenching oil for the heat treatment of cast iron and steel elements, especially in closed furnaces with controlled atmosphere, where a high surface cleanliness of the workpieces is required.
OH-70 M	22.1	160	140	-5	-	0.20	-	40-80°C	Low-temperature quenching oil for the heat treatment of cast iron and steel elements, for which small geometrical deformations are permissible at the required cooling rate.
OH-120 M	44.5	200	180	-5	-	0.60	-	110-130°C	Medium-temperature quenching oil for the heat treatment of cast iron and steel elements, for which small geometrical deformations are permissible at the required cooling rate.
OH-150 M	66.0	215	-	-6	-	-	-	130-150°C	High-temperature quenching oil for the heat treatment of cast iron and steel elements, for which small geometrical deformations are permissible at the required cooling rate.
OH-160 M	222.1	250	230	-3	-	0.90	-	160-180°C	High-temperature quenching oil for the heat treatment of cast iron and steel elements, for which small geometrical deformations are permissible at the required cooling rate.

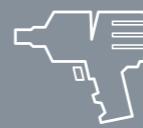
If you have any application concerns, please contact the Oil Service Team. For contact details, see page 25 of the catalogue; e-mail: serwis@orlenoil.pl

** Kinematic viscosity at 20°C

Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Kinematic viscosity at 100°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point [°C]	Coking residue [% (m/m)]	Product description
ITERM SYNT 3P	1025.8 ***	15.0	2.8	-	-34 **	194	-	Synthetic heat transfer fluid for use in closed-loop heating systems with temperatures from -20 °C to 350 °C, occasionally up to 375 °C.
ITERM-4 *	837.9	4.1	1.5	-	-28	135	-	Heat transfer oil for industrial cooling and heating systems, heaters and oil systems used for heating and closed-loop heating devices.
ITERM 4 HT	851.1	19.6	4.1	107	-15	206	0.01	High-performance heat transfer oil for closed heating systems in the temperature range from -15°C to 285°C, for industrial cooling and heating systems, heaters and oil systems for heating.
ITERM 5	866.7	30.2	5.2	100	-15	226	0.01	High-tech heat transfer medium for closed and open oil-fired heating systems, closed industrial systems, cooling and heating systems where the operating temperature reaches 315°C - 320°C (temperature in the oil mass) and for solid fuel-fired furnaces where additional heat extraction systems are available.
ITERM 6 MB	877.7	40.1	5.9	94	-18	236	0.24	Heat transfer medium for closed heating systems in the temperature range from -10°C to 285°C, for industrial cooling and heating systems, heaters and oil systems for heating and for solid fuel-fired furnaces where additional heat extraction systems are available.
ITERM G 35	877.0	-	6.0	-	-18	230	0.40	Oil used as a heat carrier, recommended for closed, pressure-free heating systems with oil circulation in the liquid phase at maximum volume temperatures of up to 280°C and a maximum stratification temperature of up to 340°C.
ITERM G 100	881.8	102.0	11.4	-	-12	268	-	Oil used as a heat carrier for closed, pressure-free heating systems with oil circulation, at maximum volume temperatures of up to 280°C and a maximum stratification temperature of up to 340°C.
ITERM 30 MF	906.9	640.1	38.3	98	-15	302	0.61	Oil for lubrication of machinery and equipment operating at temperatures of up to 200°C, e.g. conveyor chains in dryers.
ITERM 32	879.3	33.1	5.4	98	-15	215	-	Heating oil recommended for use in closed heating systems, industrial cooling and heating installations, heaters and oil heating systems.
ITERM 100	868.3	20.1	4.4	95	-18	216	0.03	Heating oil for use as a heat carrier in heating devices and installations where the temperature of the oil does not exceed 200°C. It can be used in open systems and in hermetically sealed systems.

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* Product available periodically on special order ** Pour point [°C] *** Density at 20°C [kg/m³]



Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point (COC) [°C]	Product description
PILAROL EKO	0.84	63.1	200	-26	>230	Oil for the lubrication of the cutting systems (chains) and guide bars of chainsaws used in forestry or horticulture. High-quality oil for the lubrication of the cutting systems (chains) and guide bars of chainsaws used in forestry or horticulture.
PILAROL VG 68	0.88	64.9	90	-30	>220	
PILAROL VG 140	0.89	140.0	91	-28	>220	
PILAROL VG 150	0.89	157.4	97	-24	>220	
PILAROL VG 220	0.89	218.7	95	-21	>220	

If you have any application concerns, please contact the Oil Service Team. For contact details, see page 25 of the catalogue; e-mail: serwis@orlenoil.pl

Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Pour point [°C]	Flash point (COC) [°C]	Lubricating properties - weld load [kG]	Product description
PNEUMATIC VG-32	0.88	31.2	-18	>160	-	Oil for the lubrication of pneumatically driven equipment, e.g. upholstery staplers, drills, assembly spanners, etc., requiring lubrication of internal moving parts.
PNEUMATIC VG 100	0.89	101.0	-30	>220	300	Oil designed for the lubrication of heavy-duty, pneumatic percussive tools such as drills, jack-hammers, impact drills, etc.

If you have any application concerns, please contact the Oil Service Team. For contact details, see page 25 of the catalogue; e-mail: serwis@orlenoil.pl

Electrical Insulating Oils



Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Kinematic viscosity at -30°C [mm²/s]	Pour point [°C]	Flash point [°C]	Breakdown voltage [kV]	Antioxidant content	Complies with	Product description
ORLEN OIL TRAFO EN	0.88	10.3	1000	-60	142	66	none	PN-EN IEC 60296:2021 RIET, 2022 edition.	Non-inhibited electrical insulating oil for insulating and cooling various types of electrical equipment. The product is recommended for heavy-duty use in electrical equipment requiring oil, including the filling of power and distribution transformers, switches, rectifiers and switchgear.

If you have any application concerns, please contact the Oil Service Team. For contact details, see page 25 of the catalogue; e-mail: serwis@orlenoil.pl



Shock Absorber Oils

Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Kinematic viscosity at -30°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point (COC)	Resistance to foaming: Sequence I Sequence II Sequence III	Product description
AMORTYZOL 15-WL 150	0.87	15.8	460	180	-49	164	70/0 90/0 50/0	Oil for the lubrication of telescopic shock absorbers designed to dampen vibrations in vehicle suspensions, truck loading ramps and vehicle hydraulics.

If you have any application concerns, please contact the Oil Service Team. For contact details, see page 25 of the catalogue; e-mail: serwis@orlenoil.pl

Product name	NLGI grade	Thickener type	Base oil	Base oil viscosity at 40°C [mm²/s]	Operating temperature range [°C]	Worked penetration at 25°C [1/10mm]	Dropping point [°C]	Colour	Product description	Additional properties
BENTONITE GREASES										
BENTOMOS 23	2	bentonite	mineral	215	-10÷200	260-300	> 300	dark grey, with MoS ₂ additive	Grease recommended for the lubrication of rolling and plain bearings, as well as other friction surfaces, with a constant operating temperature above 100°C, primarily within the range of 120-200°C, and with sufficiently frequent replacements or refilling — up to about 220°C.	It is recommended for use under high, particularly shock loads. It is not suitable for lubricating bearings driven by low torque or bearings with small transverse clearance.
BENTOR 2	2	bentonite	mineral	215	-10÷200	260-300	> 300	brown	Grease recommended for the lubrication of rolling and plain bearings, as well as other friction surfaces, with a constant operating temperature from 120°C to 200°C.	The product is moisture-resistant and virtually non-melting. It is not suitable for lubricating bearings driven by low torque or bearings with small transverse clearance.
AUREN	1	bentonite	mineral	550	-20÷200	310-340	> 300	gold, copper additive	Grease intended for low-power electrical contacts, bearings, as well as guides and threaded connections exposed to high temperatures and corrosive environments. Its operating temperature ranges from -20 to 200°C; from 200 to 600°C it acts as a separating agent.	The grease offers excellent corrosion protection, reduces wear and friction, is resistant to aggressive gaseous agents, and is non-melting.
ALUMINIUM COMPLEX GREASES										
ALITEN EP-1	1	aluminium complex	mineral	140	-20÷120	305-345	> 200	brown	Greases designed for the lubrication of rolling bearings.	Recommended for the lubrication of bearings in equipment with central lubrication systems, operating at low temperatures and requiring grease to be pumped over long distances.
ALITEN EP-2	2	aluminium complex	mineral	140	-20÷120	260-300	> 200	brown		Recommended for the lubrication of bearings in equipment with individual lubrication systems and central lubrication systems, operating at high ambient temperatures and requiring grease to be pumped over short distances.
ALITEN EKO-OK	-	aluminium	vegetable oil	35	-10÷50	-	-	dark grey		Grease intended primarily for the lubrication of railway wheel flanges and rails.
LITHIUM COMPLEX GREASES										
GREASEN SYNTEX HT 2	2	lithium complex	synthetic	48	-50÷180	260-300	260	brown	Grease designed for the lubrication of heavy-duty and high-speed rolling and sliding bearings and other mechanisms.	It has antistatic properties and is compatible with copper alloy components as well as with a large proportion of elastomers, which makes it possible to lubricate metal-plastic and metal-rubber friction centres. It is suitable for mechanisms exposed to shock loads, vibrations, high dust, moisture and water washout.
TYTALIT AV-395	2	lithium complex	synthetic	50	-55÷180	265-295	>240	brown	Grease designed for high-speed bearings, precision mechanisms, and maintenance-free sealed friction points operating up to 120°C, as well as other heavily loaded friction assemblies.	The grease contains an additive package providing high oxidation resistance, corrosion protection, resistance to water washout, and the required lubricating properties and lubricating film strength.
TYTALIT GOLD 2	2	lithium complex	synthetic	50	-55÷180	265-295	>250	dark grey, MoS ₂ additive	Greases intended for the lubrication of various friction assemblies such as bearings, gearboxes, constant velocity joints, threaded connections operating under high loads and extreme temperatures. The greases are designed for use in heavy construction and mining equipment.	The composition of the greases provides superior lubricating, anti-corrosion and adhesive properties — enabling operation under extreme load conditions, across a wide temperature range, and in heavily dust-laden environments.
GREASEN COMPLEX 2	2	lithium complex	mineral	100	-40÷160	260-300	260	brown	Grease intended for the lubrication of heavily loaded friction assemblies and bevel gears in brushcutters. It is also recommended for applications with frequent reversal of movement direction or where low movement speeds are combined with high loads, such as in constant velocity joints.	The product is a lithium complex grease with a molybdenum disulphide (MoS ₂) content of 3%. It is resistant to moisture, steam, as well as weak acids and alkalis. The grease is also resistant to vibration, high pressures, and shock loads.
GREASEN EP-23	2	lithium complex	mineral	140	-30÷140	260-300	220	dark grey, MoS ₂ additive		
LITEN PREMIUM LT-4EP1	1	lithium complex	mineral	140	-30÷140	310-340	250	brown		
LITEN PREMIUM LT-4EP2	2	lithium complex	mineral	140	-30÷140	265-295	250	brown	Greases recommended for the lubrication of: rolling and plain bearings (including in centralised lubrication systems), slow-speed and low to medium-loaded gearboxes, joints and slideways of machinery. It can also be successfully used as a multifunctional automotive grease.	The greases exhibit excellent tribological performance and ageing resistance. A modern formulation of performance-enhancing additives also provides a higher dropping point, improved low-temperature properties, and greater resistance to water washout compared to conventional lithium greases.
LITEN PREMIUM LT-4EP3	3	lithium complex	mineral	140	-30÷140	220-250	260	brown	Multipurpose, high-temperature greases for heavy-duty applications. Used in rolling and plain bearings, automotive wheel hubs, guides, joints, and other mechanisms lubricated either manually or via centralised lubrication systems. Due to their stability and durability, they are suitable for long-term and maintenance-free lubrication under standard operating conditions.	They offer excellent corrosion protection, lubricating properties, and oxidation resistance. They reduce wear and friction across a wide temperature range due to a durable protective layer formed by the grease's strong adhesion to the substrate. They provide lubrication and corrosion protection even in the presence of water, and ensure high mechanical stability. They also exhibit good sealing properties, protecting friction assemblies from dust, dirt, and water.
G-421 EP-1 GREASE	1	lithium complex	mineral	120	-35÷160	310-340	>230	brown		
G-421 EP-2 GREASE	2	lithium complex	mineral	120	-35÷160	265-295	>240	brown		
G-421 EP-3 GREASE	3	lithium complex	mineral	120	-35÷160	220-250	>240	brown		
SMAROL NANO GREASE FOR LAWNMOWERS	2	lithium complex	mineral	100	-30÷160	260-300	230	dark grey	Grease intended for the lubrication of bevel gears of all types of lawnmowers and trimmers, both petrol and electric. It can also be used successfully around the home, in workshops, and on farms for lubricating and protecting against corrosion of hinges, locks, threads, and components of vehicles and machinery across a wide temperature range.	The product contains a unique NANO formula, comprising a mixture of solid nanostructured lubricating particles. The grease adheres excellently to lubricated surfaces, forming a durable layer that withstands heavy loads, moisture, acids, alkalis, and very high temperatures.

If you have any application concerns, please contact the Oil Service Team. For contact details, see page 25 of the catalogue; e-mail: serwis@orlenoil.pl

* Product available periodically on special order ** Non-standard penetration range

Product name	NLGI grade	Thickener type	Base oil	Base oil viscosity at 40°C [mm²/s]	Operating temperature range [°C]	Worked penetration at 25°C [1/10mm]	Dropping point [°C]	Colour	Product description	Additional properties
LITHIUM GREASES										
UNILIT ŁT4 EP-00	00	lithium	mineral	100	-30÷120	400-430	>180	green	Multipurpose greases for stationary and centrally lubricated rolling and plain bearings, for the lubrication of chassis components, joints, medium-loaded low-speed gearboxes, and other components.	They offer excellent corrosion protection, lubricating properties, and oxidation resistance. They are resistant to washout by hot and cold water and provide lubrication and corrosion protection even in the presence of water.
UNILIT ŁT4 EP-1	1	lithium	mineral	100	-30÷120	310-340	>190	green		
UNILIT ŁT4 EP-2	2	lithium	mineral	100	-30÷120	265-295	>195	green	Greases intended for the lubrication of automotive rolling bearings, universal joints during assembly, control cables and machine guides, and other equipment components, as well as plain bearings operating within the permissible temperature ranges.	They provide high oxidation resistance, corrosion protection, and enhanced lubricating film durability.
UNILIT ŁT4 EP-3	3	lithium	mineral	100	-20÷120	220-250	>195	green		
GREASEN ŁT-4 S-2	2	lithium	mineral	100	-20÷120	265-295	200	green	Greases used for the lubrication of rolling and plain bearings, mainly in agricultural machinery, but also suitable for other machinery requiring bearing grease.	These are multifunctional products, enriched with additives providing antioxidant, anti-corrosion, and enhanced lubricating properties.
GREASEN ŁT-4 S-3	3	lithium	mineral	100	-20÷120	220-250	200	green		
ŁT4 S-2 AUTOMOTIVE GREASE	2	lithium	mineral	100	-20÷120	265-295	>190	green	Greases designed for the lubrication of sealed rolling bearings operating under demanding conditions requiring properties such as oxidation resistance, corrosion protection, water resistance, and mechanical stability.	Formulated with a package of antioxidant, anti-rust, and lubricity-enhancing additives. Selection of grease depends on the method of grease delivery (e.g. centralised or manual lubrication), rotational speed, and operating temperature of the bearing.
ŁT4 S-3 AUTOMOTIVE GREASE	3	lithium	mineral	100	-20÷130	220-250	>195	green		
LITEN ŁT-4P2 *	2	lithium	mineral	100	-20÷120	260-300	202	brown	Greases intended for the lubrication of rolling and plain bearings.	They reduce wear and friction and provide excellent corrosion protection. Suitable for use in workshops as well as for everyday maintenance in household applications.
LITEN ŁT-4P3	3	lithium	mineral	100	-20÷120	220-260	205	brown		
LITEN ŁT-41	1	lithium	mineral	100	-20÷120	310-340	200	brown	Greases intended for the lubrication of rolling and plain bearings in various machines under normal operating conditions.	Grease intended for the lubrication of bearings in equipment with central lubrication systems operating at low temperatures and requiring long-distance grease transfer.
LITEN ŁT-42	2	lithium	mineral	100	-20÷120	265-295	202	brown		
LITEN ŁT-43	3	lithium	mineral	100	-20÷120	220-250	205	green	Greases recommended for the lubrication of rolling bearings operating under high loads, as well as for less heavily loaded bearings subjected to shock loads.	Grease intended for the lubrication of bearings in equipment with central lubrication systems and central lubrication systems operating at high ambient temperatures and requiring short-distance grease transfer.
ŁT-41 LITHIUM GREASE	1	lithium	mineral	100	-20÷120	310-340	>190	green		
ŁT-42 LITHIUM GREASE	2	lithium	mineral	100	-20÷120	265-295	>190	green	Greases intended for the lubrication of rolling and plain bearings in various machines under normal operating conditions.	Grease intended for the lubrication of bearings in equipment with individual lubrication systems.
LITEN EP-0	0	lithium	mineral	140	-20÷120	355-385	190	brown		
LITEN EP-1	1	lithium	mineral	140	-20÷120	310-340	200	brown	The EP-0 lithium grease is intended for the lubrication of bearings in equipment with central lubrication systems operating at low temperatures (-20°C to +10°C), requiring grease to be pumped over very long distances.	The EP-1 lithium grease is intended for the lubrication of bearings in equipment with central lubrication systems operating at moderate ambient temperatures, requiring grease to be pumped over long distances.
LITEN EP-2	2	lithium	mineral	140	-20÷120	265-295	200	brown		
LITEN EP-3	3	lithium	mineral	140	-20÷120	220-250	200	brown	Greases intended for the lubrication of rolling and plain bearings, as well as other medium-loaded components, including gearboxes.	The EP-2 lithium grease is intended for the lubrication of bearings in equipment with individual lubrication systems and central lubrication systems operating at high ambient temperatures, requiring grease to be pumped over short distances.
EP-0 LITHIUM GREASE	0	lithium	mineral	100	-20÷120	355-385	>185	green		
EP-1 LITHIUM GREASE	1	lithium	mineral	100	-20÷120	310-340	>190	green	Used at medium temperatures within the specified range and with medium gearbox sealing.	Also used at lower temperatures within the specified range and with good gearbox sealing.
EP-2 LITHIUM GREASE	2	lithium	mineral	100	-20÷120	265-295	>190	green		
LITEN EPX-0	0	lithium	mineral	150	-20÷110	350-390	170	brown	Greases recommended for the lubrication of enclosed cylindrical and bevel gearboxes.	The grease is easily pumpable at low temperatures, reduces wear and friction, offers excellent corrosion and protective properties, ensures lubrication in the presence of water, and meets MAN 283 specification requirements.
LITEN EPX-00	00	lithium	mineral	150	-20÷110	395-435	160	brown		
CENTRACAL	00/000	lithium	naphthenic	38	-40÷110	400-460	>180	brown	Grease used for the lubrication of heavily loaded friction points. Its consistency and specially selected base oil type enable its use in automotive and industrial central lubrication systems under variable temperature conditions.	Its good water resistance makes it suitable for lubricating bearings operating in contact with water, such as washing machine bearings or water pump bearings.
LITEN LV 2-3	2/3	lithium	mineral	50	-30÷120	240-280	>185	light yellow		
LITEN LV 2 EP	2/3	lithium	mineral	50	-30÷120	240-280	>185	light brown	Grease intended primarily for the lubrication of rolling bearings operating under increased pressure and high dynamic loads. It is also suitable for lubricating plain bearings and small gearboxes with low or medium loads.	Good water resistance makes it suitable for use in bearings exposed to water (washing machine bearings, automotive water pumps, etc.).
LITEN LVG 2 *	2/3 **	lithium	mineral	50	-30÷120	240-280	>180	dark grey, with graphite additive		
LITEN LVT 2-M *	1/2 **	lithium	mineral	200	-25÷120	270-310	>180	dark grey, with MoS ₂ additive	Grease intended mainly for the lubrication of plain shaft bearings operating under the conditions of high pressure and dynamic stresses. Also suitable for the lubrication of gears, pins, bushings and other mechanisms as well as slow-running rolling bearings.	Not recommended for higher-speed rolling bearings due to its solid lubricant content (5% MoS ₂).
SMAROL UNIVERSAL	2	lithium	mineral	100	-20÷120	265-295	202	brown		

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Product name	NLGI grade	Thickener type	Base oil	Base oil viscosity at 40°C [mm²/s]	Operating temperature range [°C]	Worked penetration at 25°C [1/10mm]	Dropping point [°C]	Colour	Product description	Additional properties
CALCIUM GREASES										
GREASEN STP	1 **	calcium	mineral	40	-20÷60	300-350	95	brown	Intended only for periodical lubrication of vehicle chassis, pins, joints, guides. Not suitable for the lubrication of rolling bearings and water pumps.	The soft consistency of the grease allows easy use of lubricating devices such as pneumatic lubricators. Quite resistant to cold water.
GREASEN GRAFIT	≥ 2 **	calcium	mineral	100	-20÷60	>250	95	dark grey, with graphite additive	Grease for the lubrication of: automotive springs, open gears, worm gearboxes, screw threads exposed to corrosive action, chains and other heavily loaded friction nodes. May be used as a typical assembly grease.	The product is resistant to cold water. Not suitable for the lubrication of any automotive components except springs. Not suitable for rolling bearings and other precision mechanisms.
GREASEN GRAFIT PLUS	2	calcium	mineral	100	-20÷60	260-300	>85	dark grey, with graphite additive	Greases intended for the lubrication of leaf springs, screw threads, chains, open gear drives, worm gears, and other heavily loaded friction points. They may also be used as assembly greases. Not suitable for lubricating rolling bearings or precision mechanisms.	They reduce wear and friction, provide corrosion protection, and are suitable for use both in workshops and for everyday maintenance tasks. Particularly recommended for applications involving high levels of dust, exposure to water, high pressures, and transverse clearances.
GREASEN N 1	1/2	calcium	mineral	15	-30÷50	310-340	90	brown	Calcium grease intended for the lubrication of lightly loaded rolling and plain bearings operating under low pressures, within a limited temperature range, and in high-humidity environments.	Particularly recommended for use in centralised lubrication systems.
GREASEN G 3	3	calcium	mineral	50	-30÷70	215-255	95	dark grey, with graphite additive	Calcium grease specifically designed for slow-speed plain or rolling bearings that may operate in wet environments. It is commonly used for lubricating plain bearings in certain mobile machinery, such as construction equipment and agricultural machines - for example, combines, mowers, etc.	It is particularly well suited for lubricating all plain bearings operating in humid environments or in direct contact with water. The formulation contains graphite.
KALTON EP-1	1	calcium	mineral	42	-20÷60	305-345	95	brown	Grease intended for the lubrication of heavily loaded rolling bearings, particularly under shock load conditions, and also in the presence of water, e.g. metal rolling mills, presses, heavy construction machinery, etc.	Recommended for use in centralised lubrication systems.
KALTON EP-2	2	calcium	mineral	190	-10÷60	260-300	95	brown	Grease intended for the lubrication of heavily loaded rolling bearings, especially under shock load conditions, also exposed to water, e.g. metal rolling mills, presses, heavy construction machines, crushers.	Recommended for applications where bearings are manually lubricated or for lubricating devices located close to a friction node.
MACHINE GREASE 2	2	calcium	mineral	100	-10÷60	260-300	95	brown	Greases recommended for the lubrication of plain bearings and other friction surfaces. These products are not suitable for lubricating rolling bearings.	Machine grease 2 is used for lubrication when the grease must be delivered through long, narrow-diameter lines.
MACHINE GREASE 3	3	calcium	mineral	100	-10÷60	215-255	95	brown		Machine grease 3 is used when higher sealing capability of the bearing is required or when grease is delivered through larger-diameter lines over shorter distances.
CSW-1	1	calcium	mineral	130	-10÷60	290-325	93	brown	Recommended for lubricating rolling bearings in roll stands and auxiliary equipment with central lubrication systems, operating at working temperatures not exceeding 60°C, as well as for other equipment operating under high and shock loads.	CSW-1 is recommended when grease must be delivered through long, narrow-diameter lines or in low ambient temperatures.
CSW-2	2	calcium	mineral	130	-10÷60	250-285	95	brown		CSW-2 is recommended when lubrication lines are shorter and larger in diameter, or when improved sealing properties of the grease are required.
L GREASE FOR MECHANICAL BRAKES (PRG-L)	0/1 **	calcium	mineral	140	-10÷60	280-380	120	brown	Seasonal greases intended for lubricating railway brake mechanism control devices.	Product for summer use.
GREASE FOR MECHANICAL BRAKES (PRG-Z)	00 **	calcium	mineral	140	-20÷60	>380	120	brown		Product for winter use.
PWR GREASE	-	calcium	mineral	100	-	-	-	grey, with zinc dust additive	Grease used for sealing and preventing seizure of threaded connections, primarily in drill pipes. Specifically designed to operate in humid and saline water environments, particularly in the mining industry.	This grease protects components operating in brine and water environments, prevents seizing of threaded connections, adheres very well to surfaces in service, protects against rust and corrosion, resists water washout, and provides good oxidation resistance.
LITHIUM-CALCIUM GREASES										
GREASEN N-EP 00/000	00/000 **	lithium-calcium	mineral	35	-30÷90	400-460	165	brown	Greases intended for lubricating friction assemblies in heavy commercial vehicles and buses via central lubrication systems. They may also be used to lubricate various types of reduction gears lubricated with greases.	The product is approved according to MAN 283 Li-P 00/000.
GREASEN S-EP 00/000	00/000 **	lithium-calcium	synthetic	19	-45÷90	400-460	165	brown		Product based on synthetic oil.
LITEN LC EP-1	1	lithium-calcium	mineral	150	-35÷160	310-340	220	brown	Greases mainly intended for lubricating rolling bearings operating under high loads, specifically when: C/P < 7 for bearings under primarily radial loads, C/P > 15 for bearings under primarily axial loads, as well as in lightly loaded bearings subjected to shock loads.	Designed for lubricating bearings in equipment with central lubrication systems, operating at moderate ambient temperatures and requiring grease to be pumped over long distances.
LITEN LC EP-2	2 **	lithium-calcium	mineral	150	-30÷160	270-295	245	brown		Designed for lubricating bearings in equipment with individual or central lubrication systems, operating at high ambient temperatures and requiring grease to be pumped over short distances.
LITOCALE R 00/000	00/000	lithium-calcium	vegetable oil	35	-25÷100	400-475	>110	brown	Greases intended for the lubrication of railway turnouts (suggested consistency NLGI 00/000), rail flanges and railway wheelsets (suggested consistency NLGI 1/2), and other lubrication points where biodegradable, environmentally neutral greases are required, with consistency and grade selected as needed.	They offer high oxidation resistance, corrosion protection, and enhanced lubricating film strength.
LITOCALE R 2/1	2/1	lithium-calcium	vegetable oil	35	-25÷100	280-320	>140	brown		

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Product name	NLGI grade	Thickener type	Base oil	Base oil viscosity at 40°C [mm²/s]	Operating temperature range [°C]	Worked penetration at 25°C [1/10mm]	Dropping point [°C]	Colour	Product description	Additional properties
SULPHONATE GREASES										
HUTPLEX HV	1/2 **	calcium sulphonate	mineral	420	-30÷180	285-315	> 300	brown	High-temperature sulfonate grease for lubricating machine elements in the mining, metallurgical, heavy and marine industries, especially for friction nodes exposed to high impact loads and low torques operating under high dust, water and brine exposure conditions.	The grease is ideal in coal and copper mines for lubricating bearings, pin connections and other mechanisms of machinery and equipment operating in the designated temperature range. The product is also suitable for tough steelworks applications, for the lubrication of stand roller bearings of rolling mill stands.
HUTPLEX WR-2	2	calcium sulphonate	mineral	180	-25÷180	265-295	> 300	brown	High-temperature sulfonate grease for lubricating machine elements in the metallurgical industry, especially roller bearings of rolling mill stands and other friction nodes exposed to high temperatures.	Thanks to its outstanding thermal stability, the grease regains its original structure upon returning to ambient temperature. Perfectly suited for lubricating machine and equipment elements in coal and copper mining, cement plants, steel and heavy industry, as well as in all friction nodes exposed to extreme pressures and water.
SULFOCAL 102	2	calcium sulphonate	mineral	100	-30÷180	265-295	>300	brown	Grease for the lubrication of heavily loaded friction nodes, especially exposed to impact loads, dust, water and brine. Used in heavy industry, mining, metallurgy and maritime.	The unique thickener structure provides extremely high resistance to temperature, wear, galling, corrosion and oxidation. NLGI 2 consistency grade allows the grease to be dispensed through individual lubrication points.
SULFOCAL 301	1	calcium sulphonate	mineral	300	-30÷180	310-340	>300	brown		
SULFOCAL 302	2	calcium sulphonate	mineral	300	-30÷180	265-295	>300	brown		
SULFOCAL 801	1	calcium sulphonate	mineral	800	-30÷180	310-340	>300	brown		
SULFOCAL 802	2	calcium sulphonate	mineral	800	-30÷180	265-295	>300	brown		
SPECIAL GREASES										
SMAROL PTFE	spray grease	PTFE	-	-	-30÷250	-	-	white	Intended for the lubrication of machine parts exposed to high temperatures or significant impacts of water. After application and drying, it leaves a protective layer in the form of an oil film on the lubricated elements, which provides very good protection against oxidation, thus increasing resistance to ageing. It is resistant to water, steam and aggressive media (most acids and alkalis).	In addition to individual applications, it can be used in industry to lubricate the following elements: plain and articulated bearings, chains – also equipped with O-Ring or X-Ring seals, sprockets, chain wheels, levers, sliding guides, linear guide systems, spindles, hinges, steel ropes, ball joints, conveyors in ovens and dryers.
LR GREASE FOR STEEL ROPES	4	special	mineral	420	-	-	> 55	brown	Grease for the maintenance of steel ropes of various types during their manufacture.	Not suitable for the lubrication of drum hoist shaft ropes or ropes for Koepe hoisting systems.
ORLEN OIL KORON L *	-	paraffin	mineral	-	-	-	> 48	dark brown/dark green	Designed for temporary corrosion protection of metal products during storage and transport, especially for protection in mild climates.	Applied warm, in a liquid form.
GREASEN CORE	1/2	-	mineral	420	-40÷150	285-315	>300	brown	Protective plastic grease for overhead power lines made of steel wires, aluminium, aluminium alloys and for various configurations of their connections.	The grease meets the requirements of the PN-EN 50326:2003 standard for type A greases without the need for heating.
HYDROCARBON GREASES										
KOLINSTAL	5	hydrocarbon, with asphalt additive	mineral	100	up to 40	100-170	>60	black	Grease for the maintenance of steel ropes, e.g. ropes for excavators, cranes and other industrial ropes during their production and operation at a temperature not higher than 40°C. The grease is also used to impregnate organic cores of steel ropes. The grease may not be used for the maintenance of hoisting ropes cooperating with the Koepe system drive wheel.	It has very good adhesion properties and is water resistant.
CORROSION PROTECTION GREASE	-	hydrocarbon	mineral	100	up to 50	-	>60	brown	Grease for the maintenance of armament equipment. Very good adhesion to the substrate and protection against corrosion and oxidation.	Effective protection against corrosion thanks to a durable protective layer created as a result of high adhesion of the grease to the substrate.

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Table 1 Classification of greases by consistency grade according to NLGI

Grease consistency grade	Consistency	Penetration range according to NLGI	Primary application
000	very fluid	445-475	Mechanical gearboxes
00	fluid	400-430	
0	semi-fluid	335-385	
1	very soft	310-340	Rolling and plain bearings
2	soft	265-295	
3	medium	220-250	
4	firm	175-205	Special mechanisms
5	very firm	130-160	
6	extremely firm	85-115	

Table 2 Types of greases and their characteristics

Grease type depending on the thickener	Distinguishing features
Lithium greases	<ul style="list-style-type: none"> universal applications good water resistance long-lasting
Calcium greases	<ul style="list-style-type: none"> poor resistance to high operating temperatures poor adhesion very good water resistance
Aluminium complex greases	<ul style="list-style-type: none"> very good temperature resistance very good water resistance good adhesion
Bentonite greases	<ul style="list-style-type: none"> very good resistance to high temperatures no miscibility with other greases Very good pumpability
Sulphonate greases	<ul style="list-style-type: none"> excellent water resistance excellent load-carrying capacity very good temperature resistance
Lithium complex greases	<ul style="list-style-type: none"> very good temperature resistance very high durability and mechanical stability

Other



Product name	Density at 15°C [kg/m³]	Sulphur content [ppm]	Benzene content [ppm]	Content of other aromas [ppm]	Product description
EXTRACTION NAPHTHA III N.A.	732.2	0	0	5	Product with low aroma content, trace benzene and sulphur content. Obtained by distillation of hydrocarbon fractions. Characterised by a mild scent and excellent cleaning properties.
Product name	Density at 15°C [kg/m³]	Sulphur content [ppm]	Kinematic viscosity at 40°C [mm²/s]	Corrosive effect on steel shank (24h)	Product description
KALIBROL LUX	779.8	30	2.62	corrosion-resistant	Oil obtained from highly refined petroleum distillates and anti-corrosion additives. The product is used for checking, adjusting, washing and maintaining the fuel apparatus of compression-ignition engines. It can also be used to protect metal parts of fuel apparatus stored in accordance with the instructions for use.

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