



ORLEN
OIL

PRODUCT CATALOGUE
FOR INDUSTRY



V1/2024



Table of contents

4 Who we are

8 Hydraulic oils

15 Hydraulic fluids for the mining industry

15 Hydraulic and gear oils

16 Gear oils

20 Compressor oils

22 Turbine oils

24 Gas engine oils

26 Locomotive oils

27 Ship oils

28 Machine oils

32 Process oils

33 Anti-adhesive oils

34 Emulsifying oils for metalworking

36 Non-emulsifying oils for metalworking

40 Plastic forming oils

41 Maintenance oils

42 Quenching oils

43 Heat carriers

44 Saw oils

44 Electrical insulating oils

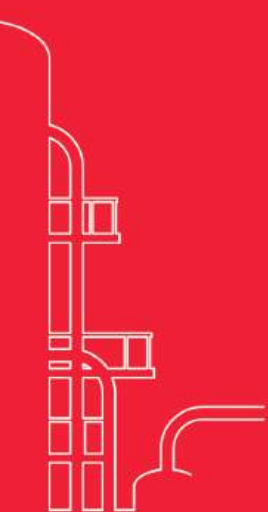
45 Oils for pneumatic equipment

45 Spring oils

46 Lubricants

54 Other

56 Alphabetical Product Index



LEADER

After the merger with LOTOS Oil in 2023, ORLEN OIL became the leader, satisfying 125% of the Polish market demand for lubricants. The quality of the company's products and development is overseen by around 700 qualified employees. Together we aim for success!

BRAND

ORLEN OIL is part of the ORLEN Capital Group. ORLEN S.A. is a multi-utility conglomerate, managing the petrochemical and upstream segments. It has refineries in Poland, the Czech Republic and Lithuania, as well as 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 more than 60 countries

16%
share of speciality products
in the portfolio



Detail

3500 stations

on 7 markets

2600 food

outlets

Over 15 million

customers of petrol stations in the
region

3 million

electricity consumers



Extraction of

1278 million boe of

2P resources in Canada, Poland,
Norway and Lithuania

>154,000 boe/d

average hydrocarbon production



Energetics

5.1 GW

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

200,000 km
power lines

ORLEN OIL

Who are we?



EFFECTIVENESS

We have 4 production sites, including a state-of-the-art logistics centre in Trzebinia and advanced sea logistics in Gdańsk, ecological production from used oils in Jedlicze and a lubricant production line in Czechowice-Dziedzice. Logistical and production efficiency for our domestic and international customers is our priority.

PRODUCTION

We have an annual production capacity of 420,000 tonnes of finished products from the oil bases of some of the most modern refineries in Central and Eastern Europe: Gdańsk Refinery and Płock Refinery ORLEN S.A. ORLEN OIL stands for stability of supply, repeatability of production batches and technologically advanced additives. The quality and compliance of ORLEN OIL products with label declarations is confirmed by the Company's membership in the ATIEL organisation. We are transparent because our brand obliges.



ORLEN OIL

Who are we?

4

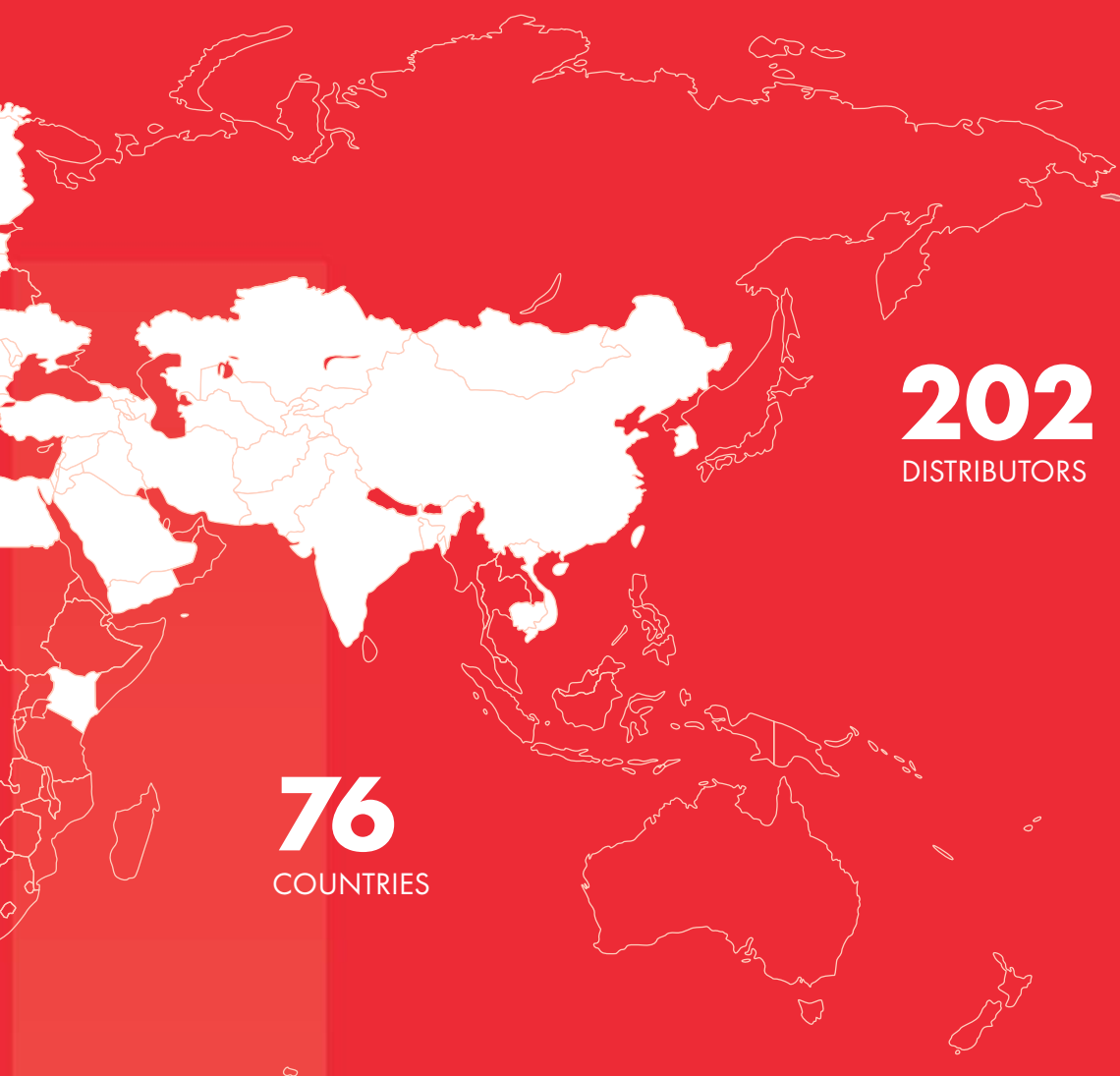
CONTINENTS

DISTRIBUTION

4 continents, 76 countries, 202 distributors - these are the numbers showing the reach of ORLEN OIL's lubricant products on the global market. Our products are appreciated in hot Africa as well as in the cold countries of the Arctic Circle. Each of the countries we serve finds in our offer the fulfilment of the individual needs of their respective automotive markets.

INVESTMENTS

We are building a state-of-the-art HBO oil block to further meet the demand for lubricants in the global market. From 2025 onwards, we will produce our own superior Group II bases with Chevron Lummus Global- IDW's proven technology, expanding our range of finished products.





Product name	Density at 15°C [kg/dm ³]	Kinematic viscosity at 40°C [mm ² /s]	Viscosity index	Pour point [°C]	Flash point [°C]	Corrosion effect on Cu plate, 100°C/3h	Quality class
HYDROL BIO HEES EL 46	919.8	47.0	191	-48	300	1	PN-ISO 15380 Tab. 4
HYDROL BIO HETG EL 46*	917.7	47.7	207	-23	306	1	PN-ISO 15380 Tab. 2
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
HYDROL HEAVY L-HV/HVLP 32 ★	863.0	32.0	150	-51	214	1a	
HYDROL HEAVY L-HV/HVLP 46 ★	871.0	46.0	150	-48	226	1a	
HYDROL HEAVY L-HV/HVLP 68 ★	878.0	66.0	152	-45	248	1a	
HYDROL HEAVY L-HV/HVLP 100 ★	880.0	100.0	150	-45	246	1a	
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	-	1a	
HYDROL POWER L-HV 68	871.5	68.4	180	-36	-	1a	
HYDROL L-HV PLUS 32 ★	862.2	31.2	180	-45	199	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV
HYDROL L-HV PLUS 46 ★	872.5	46.9	180	-45	205	1a	
HYDROL L-HV PLUS 68 ★	877.2	66.2	178	-45	217	1a	
HYDROL SYNT PE 46*	839.0	43.7	140	-54	258	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV
HYDROL EXTRA L-HV 32	853.9	32.0	158	-42	-	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV
HYDROL EXTRA L-HV 46	878.4	47.0	157	-39	-	1a	
HYDROL EXTRA L-HV 68	884.4	68.6	155	-36	-	1a	
HYDROL ARCTIC L-HV 15	874.4	15.9	330	-63	136	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV
HYDROL ARCTIC L-HV 32	866.0	32.2	263	-56	164	1a	
HYDROL PREMIUM L-HV 15	845.6	16.3	153	-39	191	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV
HYDROL PREMIUM L-HV 22	861.7	21.7	152	-37	195	1a	
HYDROL PREMIUM L-HV 32	867.3	31.6	165	-39	203	1a	
HYDROL PREMIUM L-HV 46	875.6	45.9	148	-34	210	1a	
HYDROL PREMIUM L-HV 68	880.5	65.9	146	-30	221	1a	
HYDROL L-HV 15	856.6	16.0	198	-40	178	1a	DIN 51524-3 HVLP ISO 6743-4 HV ISO 11158 HV
HYDROL L-HV 22	862.6	22.2	169	-39	192	1a	
HYDROL L-HV 32	868.2	30.8	155	-35	205	1a	
HYDROL L-HV 46	875.9	44.8	154	-42	209	1a	
HYDROL L-HV 68	880.3	65.0	148	-30	223	1a	
HYDROL L-HV 100	884.3	91.6	148	-30	232	1a	

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

* Product available from time to time by special order

PREMIUM - Zinc-free oils
PAO - poly-alpha-olefins

MEETS - complies with the approval requirements
IT HAS - is approved or certified

The ORLEN OIL portfolio has been expanded to include selected products from the LOTOS OIL range. These products are marked in the catalogue with the mark ★



Approvals	Product description
-	Easily biodegradable hydraulic oil produced on the basis of specially selected synthetic esters. Recommended for industrial and mobile hydrostatic hydraulic systems where there is a potential risk of oil leaking into the environment.
-	Easily biodegradable hydraulic oil produced on the basis of specially selected vegetable oil. Recommended for industrial and mobile hydrostatic hydraulic systems where there is a potential risk of oil leaking into the environment.
Meets: <ul style="list-style-type: none"> · Bosch-Rexroth RDE 90235 · Parker Denison HF0, HF1, HF2 · 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 systems and hydraulic drive and control. They are used in mobile hydraulic systems (operating under varying temperature conditions) for excavators, bulldozers, elevators, mining machinery and industrial systems and equipment (e.g. in the maritime industry).
It has: <ul style="list-style-type: none"> · Parker Denison HF0, HF1, HF2 · EIG certificate B mark Meets: <ul style="list-style-type: none"> · Eaton Brochure 03-401-2010 · Eaton Specification EFDGN-TB002-E · Fives Cincinnati P-68, 69, 70 	Hydraulic oils with a higher viscosity index for the lubrication of the hydraulic systems of mobile construction, mining and stationary industrial machinery. The DYNAVIS® technology from EVONIK, which is used, reduces fuel consumption and energy consumption.
Meets: <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 oils with a higher viscosity index. They contain carefully selected additives with lubricating, anticorrosive, antioxidant, deemulsifying and anti-foaming effects. Oils designed for heavily loaded power transmission and hydraulic drive and control systems, in hydraulic systems of construction and mining machinery.
-	Synthetic, zinc-free and ashless hydraulic oil produced on the basis of polyalphaolefins (PAO). Recommended for use in highly stressed power transmission and hydraulic drive and control systems with very harsh working conditions and high ambient temperatures and humidity.
It has: <ul style="list-style-type: none"> · Parker Denison HF0, HF1, HF2 · Eaton Brochure 03-401-2010 · Eaton Specification EFDGN-TB002-E · EIG certificate B mark 	Hydraulic oils with a high viscosity index and excellent shear resistance. They are mainly intended to lubricate the hydraulic systems of mobile construction and mining machinery operating in very difficult conditions (working pressure in hydraulic pumps up to 50MPa), variable temperature and humidity.
-	Hydraulic oils with excellent low-temperature properties and a very high viscosity index. Designed for use in hydraulic systems operating at extremely low ambient temperatures.
Meets: <ul style="list-style-type: none"> · Parker Denison HF0, HF1, HF2 · Eaton Brochure 03-401-2010 · Eaton Specification EFDGN-TB002-E 	Zinc-free hydraulic oils designed for highly loaded power transmission systems and hydraulic drive and control systems operating under extreme conditions of high pressure and over a wide temperature range.
It has: <ul style="list-style-type: none"> · EIG certificate B mark Meets: <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 for use in heavy-duty drive systems, high-pressure fixed and variable displacement piston pumps and precision hydraulic controls and systems. These oils are characterised by a high level of antiwear properties and additionally improved viscosity-temperature properties compared to L-HM hydraulic oils.



Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point [°C]	Corrosion effect on Cu plate, 100°C/3h	Quality class
HYDROL EXTRA HLP-D 32	869.0	31.9	99	-35	216	1a	DIN 51524-2 HLPD ISO 6743-4 HM ISO 11158 HM
HYDROL PREMIUM HLP-D 15	857.7	14.4	109	-30	170	1	DIN 51524-2 HLPD ISO 6743-4 HM ISO 11158 HM
HYDROL PREMIUM HLP-D 32	874.1	31.1	98	-34	215	1	
HYDROL PREMIUM HLP-D 46	879.5	45.9	98	-27	225	1	
HYDROL PREMIUM HLP-D 68	883.5	68.3	96	-25	230	1	
HYDROL HLP-D 22	867.1	22.1	106	-33	217	1	DIN 51524-2 HLPD ISO 6743-4 HM ISO 11158 HM
HYDROL HLP-D 32	873.8	30.9	104	-33	210	1	
HYDROL HLP-D 46	880.7	45.7	102	-30	225	1	
HYDROL HLP-D 68	886.2	67.6	99	-30	232	1	
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
HYDROL HEAVY L-HM/HLP 22 ★	867.1	22.4	101	-33	210	1a	
HYDROL HEAVY L-HM/HLP 32 ★	875.4	32.8	105	-33	228	1a	
HYDROL HEAVY L-HM/HLP 46 ★	880.3	46.3	105	-30	230	1a	
HYDROL HEAVY L-HM/HLP 68 ★	886.0	68.1	100	-30	248	1a	
HYDROL HEAVY L-HM/HLP 100 ★	891.5	101.1	99	-30	250	1a	
HYDROL HEAVY L-HM/HLP 150 ★	894.3	154.6	100	-30	268	1a	
HYDROL PREMIUM L-HM 22	864.3	22.5	102	-34	194	1a	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM
HYDROL PREMIUM L-HM 32	874.4	31.8	102	-28	210	1a	
HYDROL PREMIUM L-HM 46	879.0	45.6	102	-27	212	1a	
HYDROL PREMIUM L-HM 68	884.2	65.0	102	-26	224	1a	
HYDROL L-HM/HLP 10	853.9	10.1	101	-36	162	1a	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM
HYDROL L-HM/HLP 15	860.8	15.1	102	-35	180	1a	
HYDROL L-HM/HLP 22	865.3	21.9	102	-35	195	1a	
HYDROL L-HM/HLP 32	873.5	30.4	103	-30	211	1a	
HYDROL L-HM/HLP 46	879.5	45.3	104	-30	227	1a	
HYDROL L-HM/HLP 68	885.6	66.8	100	-27	237	1a	
HYDROL L-HM/HLP 100	878.7	98.3	99	-23	273	1a	
HYDROL L-HM/HLP 150	883.2	143.2	96	-18	282	1a	

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

PREMIUM - Zinc-free oils
MEETS - complies with the approval requirements

IT HAS - is approved or certified

The ORLEN OIL portfolio has been expanded to include selected products from the LOTOS OIL range. These products are marked in the catalogue with the mark





Approvals	Product description
-	High-quality, zinc-free hydraulic oil with cleaning properties. The product is designed for use in stationary and mobile hydraulic systems operating in variable operating conditions under high pressure and high thermal load. The oil is dedicated especially to continuous operation and where there is a danger of contamination of the system with water or condensed steam.
-	Zinc-free hydraulic oil with cleaning properties. The product is designed for use in stationary and mobile hydraulic systems operating in variable operating conditions under high pressure and high thermal load. The oil is dedicated especially to continuous operation and where there is a danger of contamination of the system with water or condensed steam.
-	Hydraulic oils with washing properties for use in various types of stationary and mobile hydraulic systems of machines and equipment operating under normal and difficult operating conditions, especially in a continuous system and where there is a danger of the system becoming contaminated with water or condensed water vapour.
It has: <ul style="list-style-type: none"> Schuler - Müller Weingarten DT55005 	Modern hydraulic oils, developed in cooperation with leading manufacturers of hydraulic systems and their equipment, e.g. BOSCH-REXROTH, PARKER DENISON, EATON. Oils recommended for heavily loaded power transmission systems as well as hydraulic drive and control systems. They are used in mobile hydraulic systems (operating under varying temperature conditions) for excavators, bulldozers, elevators, mining machinery and industrial systems and equipment (e.g. in the maritime industry).
Meets: <ul style="list-style-type: none"> Bosch-Rexroth RDE 90235 Parker Denison HF0, HF1, HF2 Eaton Brochure 03-401-2010 Fives Cincinnati P-68, 69, 70 	
It has: <ul style="list-style-type: none"> Bosch-Rexroth RDE 90235 Parker Denison HF0, HF1, HF2 Eaton Brochure 03-401-2010 Eaton Specification EFDGN-TB002-E Meets: <ul style="list-style-type: none"> Fives Cincinnati P-68, 69, 70 GM LS-2 Antiwear Hydraulic Oil Chinese Standard GB 11118.1 L-HM JCMAS HK U.S. Steel 126 	
Meets: <ul style="list-style-type: none"> Bosch-Rexroth RDE 90235 Parker Denison HF0, HF1, HF2 Eaton Brochure 03-401-2010 Fives Cincinnati P-68, 69, 70 	
-	Zinc-free hydraulic oils intended for use in highly loaded power transmission systems as well as hydraulic drive and control systems operating in extremely difficult conditions of high pressures and high temperatures.
It has: <ul style="list-style-type: none"> Eaton Brochure 03-401-2010 Meets: <ul style="list-style-type: none"> Parker Denison HF0, HF1, HF2 Eaton Specification EFDGN-TB002-E 	
-	Hydraulic oils for highly stressed power transmission and hydraulic drive and control systems, i.e. hydraulic gears, regulating and controlling mechanisms and other similar equipment, where difficult operating conditions and increased ambient temperatures and humidity prevail.
Meets: <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 	
It has: <ul style="list-style-type: none"> EIG certificate B mark Meets: <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 	
It has: <ul style="list-style-type: none"> Parker Denison HF0, HF1, HF2 EIG certificate B mark Meets: <ul style="list-style-type: none"> Eaton Brochure 03-401-2010 Eaton Specification EFDGN-TB002-E Fives Cincinnati P-68, 69, 70 	
It has: <ul style="list-style-type: none"> EIG certificate B mark Meets: <ul style="list-style-type: none"> Denison HF0, HF1, HF2 Eaton Brochure 03-401-2010 Eaton Specification EFDGN-TB002-E Fives Cincinnati P-68, 69, 70 EIG certificate B mark 	



Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point [°C]	Corrosion effect on Cu plate, 100°C/3h	Quality class
HYDROL L-HL 15	858.4	14.4	100	-35	180	1a	DIN 51524-1 HL ISO 6743-4 HL ISO 11158 HL
HYDROL L-HL 22	866.6	21.9	103	-33	197	1a	
HYDROL L-HL 32	874.1	31.0	103	-30	218	1a	
HYDROL L-HL 46	880.1	45.5	101	-28	224	1a	
HYDROL L-HL 68	884.8	66.4	98	-27	230	1a	
HYDROL L-HL 100	879.7	101.3	95	-19	264	1a	
HYDROL L-HL 150	885.2	149.1	96	-16	277	1a	
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
HYDROL PREMIUM HVLP-D 46	877.5	47.4	177	-42	230	1	DIN 51524-3 HVLPD ISO 6743-4 HV ISO 11158 HV
HYDROL HVLP-D 46	874.5	46.3	157	-39	230	1	DIN 51524-3 HVLPD ISO 6743-4 HV ISO 11158 HV
HYDROL HLPT 46	877.5	42.7	123	-39	220	1	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM
HYDROL SPECIAL 46	875.6	48.8	123	-39	220	1	DIN 51524-2 HLP ISO 6743-4 HM ISO 11158 HM
HYDROL SPECIAL 68	883.8	69.3	115	-42	225	1	
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

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Approvals	Product description
-	
It has: <ul style="list-style-type: none">· EIG certificate B mark Meets: <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 are intended for use in low- and medium-duty power transmission systems and hydraulic drive and control systems of hydrostatic drive equipment operating under moderate temperature conditions.
-	Hydraulic oil for aviation and ground technology. The product is designed for use in hydraulic systems, shock absorber assemblies and hydraulic dampers of aircraft and in hydraulic systems of ground technology.
-	Zinc-free hydraulic oil with cleaning properties and a high viscosity index. Designed for stationary and mobile hydraulic systems of machines and devices operating in normal and difficult conditions when there is a risk of contamination of the system with water or condensed water vapour. It can be used in construction machinery operating in high air pollution.
-	Hydraulic oil with cleaning properties and a high viscosity index. Designed for stationary and mobile hydraulic systems of machines and devices operating in normal and difficult conditions when there is a risk of contamination of the system with water or condensed water vapour. It can be used in construction machinery operating in high air pollution.
-	Hydraulic oil for use in highly stressed power transmission and hydraulic drive and control systems, i.e. hydraulic gears, regulating and control mechanisms and other similar equipment, where difficult operating conditions and increased ambient temperature and humidity prevail. A product with enhanced physical and chemical parameters.
-	Hydraulic oils with improved oxidation resistance. Intended for the lubrication of power transmission systems, drive and hydraulic control and regulation mechanisms, hydraulic gears. The products have been developed for use in stationary and mobile industrial machinery, vehicles, construction and mining machinery.
Meets: <ul style="list-style-type: none">· Parker Denison HF0, HF1, HF2	Mineral hydraulic oil for stationary and mobile machines, buses, forklifts, trucks and construction machinery with automatic transmission. Can also be used as HM hydraulic fluid.



Tab. Viscosity classification of industrial oils according to ISO 3448

Viscosity class in accordance with ISO 3448	Permissible kinematic viscosity range at 40°C for a given oil class [mm ² /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

Tab. 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 are intended for use in low- and medium-duty power transmission systems and hydraulic drive and control systems of hydrostatic drive equipment operating under moderate temperature conditions.
HM	HLP	HL oils with improved anti-wear properties.	Hydraulic oils for highly stressed power transmission and hydraulic drive and control systems, i.e. hydraulic gears, regulating and controlling mechanisms and other similar equipment, where difficult operating conditions and increased ambient temperatures and humidity prevail.
-	HLPD	Mineral oils with anti-wear, antioxidant and anti-corrosion additives. They contain cleaning and dispersing additives.	For use in various types of stationary and mobile hydraulic systems of machines and devices operating in normal and difficult operating conditions, when there is a risk of contamination of the system with water or condensed water vapour.
HV	HVLP	HM oils with improved viscosity-temperature properties.	Hydraulic oils for use in heavy-duty drive systems, high-pressure fixed and variable displacement piston pumps and precision hydraulic controls and systems.
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	



Hydraulic fluids for mining

Product name	Kinematic viscosity at 40°C [mm²/s]	Water content by distillation	pH of emulsion	Certificate	Product description
HYDROCOP SYNTHETIC	80.0	52	from 7 to 10	It has: • EIG certificate B mark	Emulsifying concentrate for the production of micro-emulsions with a concentration of 0.5 - 2 % (m/m) to be used in the mining industry as flame-retardant HFAE hydraulic fluid using waters with a total hardness of up to 750 mg CaCO ₃ /l (42 °n).
HYDROKOP SEMISYNTETIC	52.0	60.0	from 8 to 10		Micro-emulsion emulsifying concentrate for the production of micro-emulsions with a concentration of 0.5 - 2 % (m/m) to be used in the mining industry as flame-retardant HFAE hydraulic fluid using waters with a total hardness of up to 750 mg CaCO ₃ /l (42 °n).
HYDROKOP EKO ★	57.0	-	from 7 to 8	-	Emulsifying concentrate for hydraulic fluids HFAE is used for the preparation of flame-retardant oil and water emulsions for power hydraulics. The optimum concentration is 0.5 per cent (a concentration of 1 per cent is acceptable), using waters with a hardness of up to 40 °n.

Product name	Density at 20°C [g/ml]	Crystallization temperature, max. [°C]	Boiling point [°C]	Certificate	Product description
KONHYDR T	1.076	-35	107	It has: • EIG certificate B mark	The product is intended for the transport and temporary corrosion protection of hydraulic power equipment whose components are made of steel, copper, zinc, brass and aluminium. The liquid can be used as a working medium in refrigeration systems and as a liquid for sprinkling the floors and sides of coal trucks in winter to prevent coal from freezing and caking.

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IT HAS - is approved or certified

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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, I 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	It has: • EIG certificate B mark	Hydraulic-transmission oils recommended for the lubrication of hydraulic systems and mechanical transmissions in the mining industry and industrial machines
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	It has: • Voith Turbo 3625-006058 • Voith Turbo 3625-006072 • Voith Turbo 3625-006073 • Voith Turbo 3625-008426	Hydraulic-gearbox oil for industrial stationary clutches and hydrodynamic gears of machines operating under severe conditions.

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IT HAS - is approved or certified



Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point [°C]	Corrosion effect on Cu plate, 100°C/3h	FZG	Quality class
TRANSGEAR PAG 150	998.7	152.8	201	-30	>260	1	>13	DIN 51517-3 CLP
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	1	>12	DIN 51517-3 CLP ISO 12925-1 CKD/CKSMP GB 5903-211 CKD AGMA 9005 F16 AS
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	1	>12	DIN 51517-3 CLP ISO 6743-6 CKD/CKS/CKT ISO 12925-1 CKD/CKS/CKT AGMA 9005-EO2 U.S. Steel 224
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	1	>12	DIN 51517-3 CLP ISO 12925-1 CKD ANSI/AGMA 9005-F16 U.S. Steel 224
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	1	>12	DIN 51517-3 CLP ISO 6743-6 CKD U.S. Steel 224 AGMA 9005 D 97
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			

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Approval / certificate	Product description
Meets: <ul style="list-style-type: none"> David Brown Type G 	<p>Synthetic industrial gear oils are produced on the basis of polyalkylene glycols. Oils designed for highly loaded mechanical gears of industrial equipment operating at temperatures in excess of 200°C.</p>
Meets: <ul style="list-style-type: none"> David Brown Type G Flender gear units 	<p>Synthetic oil for industrial gears based on polyalkylene glycols. Oil intended for highly loaded mechanical gears of industrial equipment operating at temperatures exceeding 200°C.</p>
It has: <ul style="list-style-type: none"> Flender gear units 	<p>The oils are produced on the basis of modern, synthetic metallocene polyalphaolefins (mPAO) and ash-free additives. They can be used in the lubrication of calendars, various types of gearboxes, bearings operating under extreme thermal and mechanical loads. In closed industrial gearboxes, the oil's properties ensure that very long operating times are achieved, even for the entire "Fill for Life" service life.</p>
Meets: <ul style="list-style-type: none"> David Brown Type E 	<p>Synthetic oils for industrial gears based on polyalphaolefins (PAO) and esters. Products designed for various types of highly stressed gears in industrial machinery and equipment exposed to micropitting, operating at temperatures up to 180°C.</p>
It has: <ul style="list-style-type: none"> Flender gear units Meets: <ul style="list-style-type: none"> Hansen Winenergy Moventas FAG Schaffler SKF PA Cage Compatibility Test SKF Yellow Metal Compatibility Timken OK Load 	<p>Top quality, dedicated oil for wind turbine gearboxes. The unique formulation provides exceptional protection against sludge and deposit formation, keeping the system cleaner for longer and increasing the life of the filters used. A high degree of micropitting resistance, a high viscosity index, improved deemulsifying properties, effective air release as well as compatibility with sealing materials are additional advantages of this oil.</p>
It has: <ul style="list-style-type: none"> Flender gear units EIG certificate B mark 	<p>Synthetic oils for industrial gearboxes. Products intended for various types of highly loaded gears of industrial machines and devices exposed to micro pitting and operating at temperatures up to 180°C.</p>
It has: <ul style="list-style-type: none"> Flender gear units Meets: <ul style="list-style-type: none"> David Brown 	<p>Top-quality, mineral gear oils for use in industrial gears: bevel, bevel, spur, planetary, worm, geared motors, where an oil with increased load film strength is required while providing protection against micro pitting. Due to their good thermo-oxidative stability, the products provide long operating intervals at higher temperatures (up to 120°C) in modern industrial gearboxes.</p>



Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point [°C]	Corrosion effect on Cu plate, 100°C/3h	FZG	Quality class
TRANSOL SP-68	877.0	70.0	101	-30	250	1	12	DIN 51517-3 CLP ISO 6743-6 CKD ISO 12925-1 CKD AGMA 9005-F 16 AS U.S. Steel 224
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
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	1	12	DIN 51517-3 CLP ISO 6743-6 CKC ISO 12925-1 CKC
TRANSOL 100	890.1	97.9	96	-25	230			
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	18.0*	96	-14	290	1	-	GL-1

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*Kinematic viscosity at 100°C





Approval / certificate	Product description
Meets: <ul style="list-style-type: none"> David Brown Type M, A & E 	<p>Synthetic oil for industrial gears based on polyalkylene glycols. Oil intended for highly loaded mechanical gears of industrial equipment operating at temperatures exceeding 200°C.</p> <p>Industrial gear oils, manufactured from selectively refined mineral oils and an EP - Extreme Pressure - type additive package. Products intended for highly loaded mechanical transmissions of industrial equipment operating at temperatures up to 120°C.</p>
-	<p>Industrial gear oils, manufactured from selectively refined mineral oils and an EP - Extreme Pressure - type additive package. Products intended for highly loaded mechanical transmissions of industrial equipment operating at temperatures up to 120°C.</p>
Meets: <ul style="list-style-type: none"> David Brown Type M, A & E 	
-	
-	<p>Industrial gear oils, manufactured from selectively refined mineral oils and an EP - Extreme Pressure - type additive package. Products intended for highly loaded mechanical transmissions of industrial equipment operating at temperatures up to 100°C.</p>
-	<p>Basic gear oil for lightly loaded industrial enclosed gears.</p>



Product name	Kinematic viscosity at 40°C [mm²/s]	Viscosity index	Flash point at m.p. [°C]	Pour point [°C]	Quality class	Approvals	Product description
CORALIA L-DAA 46	44.7	100	223	-12	ISO 6743-3 L-DAA DIN 51506 VB, VBL	-	Oils designed for the lubrication of air reciprocating compressors and rotary vane, drop-lubricated compressors with light operating 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 ★	32.0	90	>200	-15	ISO 6743-3 L-DAB	-	Oils intended for the lubrication of piston and rotary vane air compressors, drip lubricated, with medium operating conditions.
CORALIA L-DAB 46	46.1	99	230	-15			
CORALIA L-DAB 68	65.8	100	242	-27			
CORALIA L-DAB 100	96.3	99	263	-12			
CORALIA L-DAB 150	145.1	97	276	-10			
CORALIA L-DAB 320	320.9	92	296	-9			
CORALIA L-DAB 460	476.1	93	306	-6			
CORALIA VDL 32	30.8	-	175	-9	ISO 6743-3 L-DAA, L-DAB DIN 51506 VDL	-	Oils designed for the lubrication of reciprocating, screw (with or without oil injection) and vane (with oil injection) air compressors operating in medium conditions.
CORALIA VDL 46	44.5	-	195	-12			
CORALIA VDL 68	64.7	-	195	-12			
CORALIA VDL 100	104.4	-	205	-9			
CORALIA T 46	41.7	-	232	-9	ISO 6743-3 L-DAH, ISO 6743-5 L-TSE, L-TGE DIN 51524 part 1 L-HL	-	Oil designed for the lubrication of rotary air compressors operating in medium conditions. It can also be used as a hydraulic fluid in turbine control systems and to lubricate circulating systems of steam, gas and water turbines.
CORALIA ST 32	32.2	102	219	-37	ISO 6743-3 L-DAH, ISO 6743-5 L-TSE, L-TGE DIN 51524 cz.1 L-HL	It has: <ul style="list-style-type: none"> Voith Variable Speed Drives (ISO VG 32, 46) Meets: <ul style="list-style-type: none"> Atlas Copco (ISO VG 32); Ingersoll-Rand (ISO VG 32) 	Oils designed for the lubrication of rotary screw air compressors operating in medium operating conditions with varying operating temperatures. They are used, among other applications, in the power generation industry for combined systems of pumps, compressors, turbines with gears and couplings, and centrifugal rotary turbocompressors.
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) for the lubrication of rotary, vane and screw air compressors operating under severe 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 on the basis of water-insoluble polyalkylene glycols for the lubrication of screw compressors compressing natural gas, LPG, and other hydrocarbon gases operating under severe conditions. The product is not miscible with mineral oils or other synthetic oils and cannot be used to top up oil in these systems, or vice versa. When replacing the previously used mineral/synthetic compressor oil with the oil in question, a change operation must be carried out in conjunction with cleaning and flushing of the compressor lubrication system.

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PAG - poliałkilenoglikol
POE - polyesters

MEETS - complies with the approval requirements
IT HAS - is approved or certified

The ORLEN OIL portfolio has been expanded to include selected products from the LOTOS OIL range. These products are marked in the catalogue with the mark





Oleje sprężarkowe

Product name	Kinematic viscosity at 40°C [mm²/s]	Viscosity index	Flash point at m.p. [°C]	Pour point [°C]	Quality class	Approvals	Product description
CORALIA HC 100	101.8	-	236	-37	ISO 6743-3 L-DAA, DAG	-	Oils for reciprocating and rotary air compressors, lubricated by splashing or spraying, for normal and severe conditions.
CORALIA HC 150	136.4	-	248	-34			
CORALIA VACUUM	103.8	-	280	-10*	-	-	Oil designed for use in rotary vacuum pumps.
CORALIA K-20 ★	-	22	235	-5	-	-	Oil in the SAE 60 viscosity class for the lubrication of medium and high-pressure special-purpose reciprocating compressors.
CYLITEN 460 N ★	450.0	97	320	-8	ISO 6743-4 L-HL DIN 51506 VB, VBL	-	Oil belonging to the group of greased cylinder oils for the lubrication of: high-pressure cylinders of compressors, shunting parts and throttles of steam machines and circulating systems requiring highly viscous, emulsifiable oils.

* Freezing point [°C]

Product name	Kinematic viscosity at 40°C [mm²/s]	Flash point at m.p. [°C]	Pour point [°C]	Quality class	Application
FRIGOL POE 68	68.3	272	-42	ISO 6743-3 L-DRD	Synthetic oils (polyester-based) for use in refrigeration compressors and air-conditioning units with HFC, HCFC refrigerants.
FRIGOL POE 100	99.5	262	-33		
FRIGOL M 68	66.4	202	-35	ISO 6743-3 L-DRE	Oil for the lubrication of all types of refrigeration compressors operating with refrigerants of the CFC (e.g. R12), HCFC (e.g. R22) groups and ammonia.

Product name	Kinematic viscosity at 50°C [mm²/s]	Flash point at m.p. [°C]	Freezing point [°C]	Quality class	Application
FRIGOL TZ-13	13.4	176	-50	PN-C-96072:1974 TZ-13	Oils for the lubrication of ammonia refrigeration compressors, e.g. two-stage compressors with a circulating lubrication system.
FRIGOL TZ-19	26.8	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 designed for the lubrication of ammonia and acid-carbon refrigeration compressors with evaporator temperatures up to -45°C, e.g. single-stage, horizontal, slow-running compressors.

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*Kinematic viscosity at 20°C

PAG - polialkilenoglikol
POE - polyesters

MEETS - complies with the approval requirements
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Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point [°C]	Corrosion effect on Cu plate, 100°C/3h	Oil capacity at 50°C [min]	RPVOT (oxidation test) [min.]
TURBINEX POWER TG PREMIUM 32	857.3	31.9	115	-18	212	1	2.7	1520
TURBINEX POWER TG PREMIUM 46	857.3	46.6	113	-18	244	1	2.7	1447
TURBINEX TG PREMIUM 32	842.5	31.6	132	-24	244	1	2.1	>2300
TURBINEX TG PREMIUM 46	845.6	43.6	130	-21	250	1	2.5	>2300
REMIZ SUPER TG 32 ★	844.5	32.7	129	-19	235	1	1.1	>1100
REMIZ SUPER TG 46 ★	846.5	48.1	133	-16	254	1	2	>1000
REMIZ TG 32 ★	867.1	31.7	100	-18	218	1	1.7	>750
REMIZ TG 46 ★	873.2	45.4	99	-16	232	1	2,8	>750
REMIZ TU 32 ★	867.8	31.8	99	-19	224	1	1.6	>400
REMIZ TU 46 ★	873.0	45.6	98	-17	234	1	3	>400
REMIZ TU 68 ★	873.8	66.0	99	-12	251	1	4.4	>400

Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Kinematic viscosity at 50°C [mm²/s]	Pour point [°C]	Flash point [°C]	Corrosion effect on Cu plate, 100°C/3h	Deemulsification number [s]	Standards	Product description
TURBINE T-30	871.0	51.1	-	-12	234	-	100	ISO 6743-5 L-TSA	Turbine oils for the recirculating bearing lubrication of steam turbines, water turbines and geared turbine sets in the case of a common oil circuit.
TURBINEX T-30	876.9	49.6	30.1	-15	236	1	120	ZN-66/MPCh/NF-104	

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Quality class	Approvals		Product description
DIN 51515 part 1 DIN 51515 part 2 ISO 8068	It has: <ul style="list-style-type: none"> DOOSAN Skoda Power Tp0010P 	Meets: <ul style="list-style-type: none"> MAN TED 1000454696 Rev.03 Siemens TLV 901305 Siemens TLV 901304 GEK 107395A Skoda Power Solar ES9-224 BS 489 	<p>Turbine oils recommended for lubrication and cooling of bearings of gas and steam turbines, gas-steam turbines operating in the CCGT combined cycle, also equipped with gear transmissions. Oils designed for turbine systems where increased operating temperatures and pressures occur. They can also be used as hydraulic fluids in turbine control systems and for lubrication.</p> <p>The oils are characterised by very good oxidation resistance and an extremely low tendency to form deposits.</p>
	It has: <ul style="list-style-type: none"> MAN TED 1000454696 Rev.03 DOOSAN Skoda Power Tp0010P 	Meets: <ul style="list-style-type: none"> Siemens TLV 901305 Siemens TLV 901304 GE HTGD 90117 GEK 107395A Solar ES9-224 BS 489 	
DIN 51515 part 1 DIN 51515 part 2 ISO 8068 DIN 51524 part 1 HL DIN 51517 part 2 CL	It has: <ul style="list-style-type: none"> Alstom HTGD 90117 Siemens TLV 901304 Siemens TLV 901305 Doosan Skoda Power 	Meets: <ul style="list-style-type: none"> Solar ES 9-224 BS 489 	<p>Turbine oils recommended for lubrication and cooling of bearings of gas and steam turbines, gas-steam turbines operating in the CCGT combined cycle, also equipped with gear transmissions. Oils designed for turbine systems where increased operating temperatures and pressures occur. They can also be used as hydraulic fluids in turbine control systems and for lubrication of, among others, marine turbochargers of main and auxiliary engines powered by exhaust gases.</p>
DIN 51515 part 1 DIN 51515 part 2 ISO 8068 ISO 6743-5 L TGE, L-TSE ISO 6743-4 L-HL ISO 6743-3 L-DAJ	It has: <ul style="list-style-type: none"> GE HTGD 90117 V0001 AD Siemens TLV 901304 Siemens TLV 901305 	Meets: <ul style="list-style-type: none"> Solar ES9-224 	
	It has: <ul style="list-style-type: none"> Alstom HTGD 90117 Siemens TLV 901304 Siemens TLV 901305 		
DIN 51515 part 1 DIN 51515 part 2 ISO 8068 ISO 6743-5 L-TGE, L-TSE ISO 6743-4 L-HL ISO 6743-3 L-DAH	It has: <ul style="list-style-type: none"> Alstom HTGD 90117 Siemens TLV 901304 Siemens TLV 901305 	Meets: <ul style="list-style-type: none"> Solar ES9-224 	<p>Turbine oils for the lubrication of gas turbines and rotary air compressors operating in average operating conditions at various operating temperatures. They can be used, among other things, in water, steam and gas turbines (also with gearboxes), combined cycle power generation with a combined cycle system for steam and gas turbine, hydrokinetic couplings with gearboxes, compressors, feed water pumps, circulating water pumps and other auxiliary equipment.</p>
	It has: <ul style="list-style-type: none"> Alstom HTGD 90117 Siemens TLV 901304 		
DIN 51515 part 1 ISO 8068 ISO 6743-5 L-TSA ISO 6743-4 L-HL	It has: <ul style="list-style-type: none"> Alstom HTGD 90117 Siemens TLV 901304 Skoda Energo 	-	<p>Circulating turbine oils recommended for the lubrication of steam and water turbines and associated hydraulic and control systems at varying operating temperatures.</p>
	It has: <ul style="list-style-type: none"> Alstom HTGD 90117 Siemens TLV 901304 	-	
	-	-	

Oils for gas engines



Product name	Kine-matic viscosity at 100°C [cSt]	Pour point [°C]	Flash point at m.p. [°C]	Total alkali-ne number TBN [mgKOH/g]	Struc-tural viscosity of CCS at -20°C	Sulfa-ted ash [(m/m)]	Approvals	Product description
DELGAS L 40	13.8	-18	272	5.4	-	0.48	It has: 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: type B35:40, C26:33 and type K engines, for medium-speed natural gas engines.	Oil for use in various types of stationary, four-stroke gas engines (including Jenbacher, MWM, Bergen) powered mainly by natural gas. It can be used in three-way and selective catalyst systems.
**DELGAS PREMIUM L 40	13.9	-18	276	4.6	-	0.53	-	Oil designed for use in various types of stationary, four-stroke gas engines (including Jenbacher) naturally aspirated and turbocharged, fuelled with methane-rich gases such as landfill gas, mine gas and biogas. It can be used in three-way and selective catalyst systems.
DELGAS A 15W-40	14.7	-33	230	2.0	4880	0.09	-	An ashless oil designed for use in two-stroke natural gas-fuelled engines 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 powered by methane-rich gases such as landfill gas, mine gas and biogas. It can be used in three-way and selective catalyst systems.
**DELGAS L 30 ★	12.5	-27	266	6.3	-	0.50	-	Low ash content engine oils for the lubrication of stationary engines running on natural gas and other similar mains fuels.
**DELGAS L 10W-40 ★	14.2	-39	226	6.3	5930*	0.50	-	
DELGAS EXTRA 10W-40 ★	14.1	-33	237	9.0	6260*	0.86	-	Medium ash content engine oil for the lubrication of stationary heavy-duty engines fuelled with high-sour natural gas or similar non-system gases with a highH ₂ S content. Particularly recommended for Waukesha, Caterpillar, Jenbacher and Guascor engines.

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* Structural viscosity determined at -25°C

** Product available on request





SPECIALIST OIL SERVICE

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

Professional oil service - POWER SERVICE is a wide range of services provided directly to users.

Within POWER SERVICE, we can distinguish the following areas:

»» Oil monitoring (working fluid analyses)

Successive analysis of the oil allows its condition to be assessed in terms of the degree of degradation, changes in performance properties and the presence of contaminants from wear processes and the machine's operating environment . Oil analyses provide information on the condition of the machine and enable early detection of worn components and parts, so that potential failures can be effectively prevented.

»» Maintenance of industrial oil systems

Maintenance of oil systems is primarily associated with oil filtration to the required cleanliness class, full replacement of hydraulic, gear, turbine and other oils, as well as supplementation of operating fluids (so-called top-ups) and cleaning of systems and tanks .

»» Application of process oils and operation of cooling lubricant systems for metal processing

Aqueous cooling and lubricating emulsions, used in metal cutting and grinding processes, require special supervision and care from the user during operation.

»» Qualified service offering Power Cut and Power Quench



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Oils for locomotives



Product name		API quality class	SAE viscosity class	Kine-matic viscosity at 100°C [mm ² /s]	Viscosity index	Pour point [°C]	Flash point [°C]	Total alkali-ne number [mgKOH/g]	Product description
IBIS RDEO 40	★	CF/SF/CF-4	40	14.5	102	-36	267	13.5	RDEO (Rail Diesel Engine Oil). They provide excellent lubrication for diesel locomotive engines, auxiliary marine engines, stationary gensets operating under severe operating conditions. The oil can also be credited 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) type RDEO (Rail Diesel Engine Oil) provides excellent lubrication for four-stroke diesel engines used in railway machinery engines. It can be used for the lubrication of petrol and diesel engines in stationary gensets and technical equipment, auxiliary marine engines operating at very high ambient temperatures and severe operating conditions. The oil can also be credited 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 the lubrication of heavy-duty diesel railway internal combustion engines operating under severe operating conditions. It can also be used to lubricate diesel engines of a similar type in other technical equipment. Recommended for engines where an oil without zinc-containing additives 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 land-based stationary engines, auxiliary marine engines where a zinc-free heavy-duty engine oil is required for design reasons. The oil has high dispersant-washing 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, high-pressure railway combustion engines operating in difficult operating conditions. It can also be used to lubricate diesel engines of a similar type in other technical equipment.

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





Shipping oils

Product name		Kinematic viscosity at 100°C [cSt]	Total alkali- ne number TBN [mgKOH/g]	Pour po- int [°C]	Viscosity and quality class	Approvals	Product description	
MARINOL RG 330	★	11.5	4	-15	SAE 30	-	SO (System Oil) type oils for engines running on light fuel. Designed for the recirculating lubrication of marine propeller 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	Meets: <ul style="list-style-type: none">· Pielstick· MAN B&W· MAN Augsburg· New Sulzer Diesel· Wartsila	TPEO (Trunk Piston Engine Oil) type oils, designed for the lubrication of marine unshielded engines operating on light fuel.	
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			
MARINOL RG 2030	★	11.5	21	-15	SAE 30, API CF		TPEO (Trunk Piston Engine Oil) type oils, intended for circulating-cylinder lubrication of main drive main drive pistonless marine engines operating on fuel with a sulphur content of up to approximately 2 %.	
MARINOL RG 2040	★	14.5	21	-15	SAE 40, API CF		Trunk Piston Engine Oil (TPEO) for cylinder lubrication of callused engines during run-in and low sulphur fuel operation.	
MARINOL RG 2050	★	22.0	21	-12	SAE 50, API CF		Modern cylinder oil (MCL) for two-stroke marine engines and for the lubrication of main propulsion callout engines.	
MARINOL RG 2550	★	19.5	25	-18	SAE 50			
MARINOL RG 3030	★	11.5	32	-15	SAE 30, API CF			TPEO (Trunk Piston Engine Oil) oils, intended for circulating-cylinder lubrication of marine main drive pistonless engines and units operating on heavy fuel.
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	It has: <ul style="list-style-type: none">· WinGD· MAN Meets: <ul style="list-style-type: none">· Pielstick· New Sulzer Diesel	Modern cylinder oils (MCL) for two-stroke ship engines and for circulating-cylinder lubrication of main drive engines.	
MARINOL RG 7050	★	19.2	70	-27	SAE 50			
MARINOL RG 8550	★	20.0	87	-27	SAE 50	-		
MARINOL RG 10050	★	19.5	100	-27	SAE 50	It has: <ul style="list-style-type: none">· MAN Meets: <ul style="list-style-type: none">· WinGD· Pielstick· New Sulzer Diesel		
MARINOL RG 14050	★	19.5	140	-24	SAE 50			Meets: <ul style="list-style-type: none">· WinGD· MAN· Pielstick· New Sulzer Diesel
MARINOL MW 50	★	21.0	4.0	-18	SAE 50	-	Oil designed for the lubrication of high-pressure, high-speed marine engines operating on light fuel. Ensures proper lubrication of the cylinder and crankshaft systems of engines.	
MARINE OIL SC-22	★	22.0	-	-5	SAE 60	-	Engine oil for cylinder lubrication of high-power marine engines.	

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*Other products from the MARINOL range available on special request.

MEETS - complies with the approval requirements **IT HAS** - is approved

The ORLEN OIL portfolio has been expanded to include selected products from the LOTOS OIL range. These products are marked in the catalogue with the mark





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]
VELOL P 150	878.1	152.9	15.5	102	-33	280
VELOL P 220	885.6	228.9	19.9	101	-27	284
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
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
VELOL 19	856.6	20.2 *	-	-	-43	168
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
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
L-AN 10	853.4	10.3	2.7	101	-18	154
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

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*Kinematic viscosity at 20°C

MEETS - complies with the approval requirements



Quality class	It meets the requirements of:	Product description
DIN 51502 C	Meets: <ul style="list-style-type: none"> · DIN 51517-1 C · DIN 51517-2 CL 	Circulating oils characterised by very good oxidation resistance and good water release properties. The products are compatible with SRE-NBR 28/SX type seals and are used in machine circulation systems, low and medium duty enclosed gearboxes and light duty, reciprocating, rotary, vane, air compressors.
-	-	Fluid friction bearing oils for large metallurgical units in the sheet rolling process. In addition, they can be used as non-emulsifying, refined high-quality machine oils. The products meet MORGOL's basic requirements.
ISO 6743-13 GB DIN 51502 CG	Meets: <ul style="list-style-type: none"> · Fives Cincinnati P-53 	Oils for all types of slideways and, in particular, for the lubrication of horizontal slideways operating at moderate temperatures and under moderate to medium loads. They guarantee proper slide operation with particular emphasis on proper friction characteristics and the elimination of the stick-slip phenomenon.
	-	
	Meets: <ul style="list-style-type: none"> · Fives Cincinnati P-47 	
	-	
	Meets: <ul style="list-style-type: none"> · Fives Cincinnati P-50 	
-	-	Machine oils for through- and bath lubrication of high-speed textile machine components, machine tools and other precision equipment components in accordance with lubrication instructions. They can also be used for machining metals: steel, brass, e.g. turning, milling, threading, etc.
ISO 6743-1 AN	-	Oils used for lightly and moderately loaded, rotating machine parts such as rolling and plain bearings, guides or spindles. They can also be used in washing and rinsing processes for mechanical components of machines and tanks.
ISO 6743-1 AN DIN 51502 AN	Meets: <ul style="list-style-type: none"> · DIN 51501 	Machine oils for lightly to moderately loaded operating elements of industrial machines and equipment, such as rolling and sliding bearings, guides, mechanical gears, spindles and auxiliary friction nodes.



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]
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

Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 50°C [mm²/s]	Kinematic viscosity at 100°C [mm²/s]	Freezing point [°C]	Flash point [°C]	Acid number [mg KOH/g]
LUBRICATED MACHINE OIL MN-11	896.0	82.2	-	-13	292	0.15
LUBRICATED MACHINE OIL MN-15	898.4	111.2	-	-13	286	0.02
CYLINDER OIL CL-17 (PN-240)	893.4	-	22.7	-9	>240	-
CYLINDER OIL CL-30 (PP-280)	901.2	-	39.7	-9	>280	-
CYLINDER OIL CL-40 (PW-300)	902.0	-	55.0	-9	>300	-
CYLINDER OIL CL-1500 ★	903.0	1472.0 **	-	-	330	-
CYLINDER OIL P 28	904.0	-	29.4	-6	308	-
CYLINDER OIL B 28	902.8	-	31.3	-6	325	-
U AXLE OIL	874.4	44.0	-	-230	246	-

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**Kinematic viscosity at 40°C





Quality class	It meets the requirements of:	Product description
ISO 6743-1 AN DIN 51502 AN	Meets: <ul style="list-style-type: none"> DIN 51501 	Low-solidification machine oils intended for lightly or medium-loaded working elements of industrial machines and devices, such as: rolling and sliding bearings, guides, mechanical gears, spindles and auxiliary friction nodes.

Standards	Product description
PN-56/C-96074	Lubricated machine oils are a mixture of mineral oils with oxidised vegetable oil. They are used for the lubrication of: steam engine bearings of rolling stock, bearings exposed to contact with water, with which lubricated machine oils form a permanent lubricating emulsion, and machine bearings exposed to higher specific loads.
PN-61/C-96095 DIN 51519, DIN 51510 for oil class ZB	<p>The oils are designed for the lubrication of cylinders, shunting parts and stuffing boxes of steam engines, circulating systems requiring high-viscosity, non-emulsifying machine oils, mechanical transmissions and other heavy-duty systems requiring oil with high adhesion and water resistance. Cylinder oils are used in machine systems with saturated steam at temperatures:</p> <ul style="list-style-type: none"> up to 250°C- CL-17 cylinder oil (PN-240) up to 290°C- cylinder oil CL-30 (PP-280) up to 310°C- CL-40 cylinder oil (PW-300)
DIN 51519, DIN 51510 for ZB oil class	Cylinder oil for the lubrication of guides and cylinders of steam machines, other systems where there is the possibility of contact with high-temperature steam, high-pressure cylinders of compressors, shunting parts and glands of steam machines and others requiring the use of high-viscosity oil.
-	Cylinder oils are designed for the lubrication of cylinders, shunting parts and stuffing boxes of steam engines. The main function of these oils is to prevent ring and cylinder wear and to seal spaces operating at high temperatures and with steam.
-	
PN-61/C-96097	Oil primarily intended for the lubrication of slide bearings of steam locomotives and railway and tramway cars.



Product name		Density at 15°C [kg/m ³]	Kine-matic viscosity at 40°C [mm ² /s]	Kine-matic viscosity at 100°C [mm ² /s]	Viscosity index	Pour point [°C]	Flash point [°C]	Quality class	Product description
GRAPHITOL	★	900	545.0	34.0	-	-12	325	ISO 6743-1 L-AN DIN 51502 AN	A process oil used mainly in the production of printing inks and as an ingredient in rubber compounds. It is also used as a release agent in mineral wool processing and other non-standard applications requiring a technologically clean, 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 for a variety of processes, such as the production of plasticisers, rubber compounds, resin viscosity modifiers and adhesive components. Also used as lubricants and for unconventional industrial solutions. KVG 150 Z oil additionally has a reduced flow point - possible operation at reduced temperatures. KVG 460 oil is used for 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 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 for 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 for lubrication of precision machinery and equipment (bearings, guides, mechanical gears, spindles, etc.), high-speed bearings (headstock) and auxiliary friction nodes.

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Anti-adhesive oils

Product name	Density at 15°C [kg/m ³]	Kinematic viscosity at 40°C [mm ² /s]	Flash point [°C]	Acid number [mg KOH/g]	Quality class	Application method	Product description
KONKRETON V-BIO	877.3	7.1	150	6.4	ISO 6743 B	· spray · roller	Low viscosity, biodegradable release oils for lubrication of moulds made of steel, aluminium, plastic and wood, used in the manufacture of precast concrete and other concrete components. The products also protect steel moulds against corrosion in the short term.
KONKRETON BIO-BIT	884.7	10.7	-	-	ISO 6743 B		
KONKRETON V	842.7	4.7	146	6.1	ISO 6743 B	· spray	Release oil for lubrication of moulds used in the manufacture of precast concrete elements and other concrete components. The product can be used to lubricate cold metal and plastic moulds.
KONKRETON VS	849.4	5.7	115	6.2	ISO 6743 B	· spray	Release oil for lubrication of moulds used in the manufacture of precast concrete elements and other concrete components. The product can be used to lubricate cold moulds.
KONKRETON L	866.5	21.8	222	3.3	ISO 6743 B	· spray	Anti-adhesive oil intended for lubrication of cold moulds used in the production of concrete elements and blocks made of light aerated concrete.
KONKRETON L PLUS	878.5	76.5	260	2.9	ISO 6743 B	· brush	Oil for lubricating moulds as a release agent in the manufacture of cellular concrete. The oil ensures easy separation of the product and protection of the mould from corrosion.
KONKRETON N ★	878.2	38.8	228	3.1	ISO 6743 B	· spray	Anti-adhesive oil intended for lubrication of moulds used in the production of concrete elements and blocks made of light aerated concrete. Oils can be used to lubricate cold moulds by spraying in the manufacture of cellular concrete.
KONKRETON P	887.4	79.8	254	3.2	ISO 6743 B	· brush	Anti-adhesive oil intended for lubrication of moulds used in the production of concrete elements and blocks made of light aerated concrete.
KONKRETON S	891.1	112.5	278	3.3	ISO 6743 B	· spray · roller	Release oils for lubrication of moulds used in the manufacture of cellular concrete blocks, where an increased thickness of the separation layer is required. Thanks to their suitably selected properties, the products can be used in the production process all year round.
KONKRETON XS	894.4	156.1	280	3.0	ISO 6743 B		
KONKRETON AZ	845.5	9.4	156	3.2	ISO 6743 B	· spray · brush	Anti-adhesive oil intended for the lubrication of moulds used in the production of lightweight aerated concrete blocks, concrete rings and fences, and prefabricated concrete elements of various sizes.
KONKRETON MK S-E	874.6	7.2	142	6.7	ISO 6743 B	· spray · brush · roller	Low viscosity anti-adhesive oils intended for the lubrication of molds made of steel, aluminum, plastics and wood used in the production of prefabricated concrete and ceramic elements.
KONKRETON MK S-L	863.5	6.2	150	6.4	ISO 6743 B		
KONKRETON SEPAR	864.3	5.5	142	13.4	ISO 6743 B		
KONKRETON SDA	866.5	7.8	154	10.7	ISO 6743 B		
KONKRETON 30	867.8	6.8	146	74	ISO 6743 B		
ANTI-ADHESIVE OIL B-0	864.1	17.5	184	6.0	ISO 6743 B	· spray · brush	Anti-adhesive oil for lubrication of steel moulds with large surface areas and high unit pressures.
FORMEX Q	847.8	12.5*	110	5.9	ISO 6743 B	· spray · brush · roller	Anti-adhesive oil for lubrication of steel moulds in the production of precast concrete and reinforced concrete elements, as well as for steel and wooden formwork in the construction industry.
FORMEX XS	829.5	1.4*	82	>0.5	ISO 6743 B	· spray · brush	Oil for lubricating moulds as a release agent in the manufacture of cellular concrete. The oil ensures easy separation of the product and protection of the mould from corrosion.
CERAMOL Q ★	835.8	4.3*	100	5.4	ISO 6743 B	· spray · brush · roller	Oil used in the manufacture of stoneware and porcelain and electrical porcelain.
CERAMOL B	839.2	11.3*	75	5.2	ISO 6743 B	· spray · brush · roller	Anti-adhesive oil used in the ceramic industry, in the production of stoneware, porcelain and electrical porcelain as a compound. The product is used to improve the demoulding of manufactured products, to prevent the mass from sticking to the moulds and to protect the moulds from corrosion.
OIL FOR CERAMICS BQ ★	835.2	4.3*	100	6.2	ISO 6743 B	· spray · brush · roller	Anti-adhesive oil used in the manufacture of ceramic products. The product is used in the production of stoneware and porcelain products and electrical porcelain as a component of kaolin mass.
SEPARATION OIL	881.9	30.3	202	-	-	· spray · brush	Separation oil for the preparation of a water-in-oil emulsion used to eliminate the phenomenon of asphalt mass sticking to metal surfaces of asphalt transport vehicles, road paving machines and road rollers.

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* Kinematic viscosity at 20°C [mm²/s]

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Product name	Kinematic viscosity of the concentrate at 40°C [mm²/s]	Emulsion appearance at 20°C	5% emulsion pH	Corrosion protection capacity on steel plates using the Herbert method	Emulsion stability at 24h/20±50°C	Refractometric index at 20°C	Water hardness [°n]
UNICOOL MIKRO EP	65.0	Transparent to opalescent liquid	9.2	H0	withstands	1.4	From 10 °n to 20 °n
UNICOOL MIKRO E	1.0	Transparent to opalescent liquid	-	H0	withstands	2.5	From 10 °n to 20 °n
UNICOOL MIKRO 40 P	15.8	Transparent to opalescent liquid	9.4	H0	withstands	2.3	From 10 °n to 15 °n
UNICOOL MIKRO 40 PS	5.6	Transparent to opalescent liquid	9.4	H0	withstands	1.9	From 10 °n to 15 °n
UNICOOL MIKRO 40 PW	15.8	Transparent to opalescent liquid	9.4	H0	withstands	2.3	From 10 °n to 15 °n
UNICOOL AL.	54.0	-	9.3	-	-	1.1	< 10 °n
UNICOOL WO ★	29.0	Milk emulsion	9.2	H0	withstands	1.5	From 10 °n to 15 °n
UNICOOL WO PRO ★	68.0	Milk emulsion	9.6	H0	withstands	1.0	From 10 °n to 25 °n
UNICOOL WO PRO MW	69.0	Milk emulsion	9.7	H0	withstands	1.0	From 10 °n to 25 °n
EMULGOL DS 30	28.5	Milk emulsion	9.2	H0	withstands	1.5	From 10 °n to 15 °n
EMULGOL ES-12	30.5	Milk emulsion	9.1	H0	withstands	1.4	From 10 °n to 15 °n





Oleje emulgujące do obróbki metali

Material to be processed	Recommended working concentrations	Product description
<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 chip machining (turning, milling): 3-5%, very heavy chip machining (reaming, threading): 5-8%. 	Semi-synthetic emulsifying concentrate (microemulsion) with EP additives, used for heavy metalworking operations: cutting, grinding.
<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%), pressing, moulding: 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, drilling, reaming, threading, shaping, grinding. Suitable for low and high pressure CNC systems. It can be used in central systems and in individual machines.
<ul style="list-style-type: none"> cast iron iron alloys and stainless steel aluminium alloys plastic materials 		Semi-synthetic concentrate (microemulsion), used for typical machining processes: turning, milling, forming, grinding. Suitable for low and high pressure CNC systems. It can be used in central systems and in individual machines. The product should be stored at a temperature of +10°C to +30°C in the manufacturer's packaging protected from dust, frost and excessive heat.
<ul style="list-style-type: none"> steel cast iron copper aluminium and its alloys 		Semi-synthetic concentrate (microemulsion), used for typical machining processes: turning, milling, drilling, reaming, drilling deep holes, threading, forming, grinding. Suitable for low and high pressure CNC systems. It can be used in central systems and single machines.
<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 machining (5-6%), heavy machining (7-8%), grinding: light (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 machining (5-6%), heavy machining (6-8%), reaming: light machining (4-5%), medium machining (8-10%), heavy machining (10-12%). 	Semi-synthetic concentrate (microemulsion), used for typical machining processes: turning, milling, drilling, reaming, drilling deep holes, threading, forming, grinding. Suitable for low and high pressure CNC systems. It can be used in central systems and single machines.
<ul style="list-style-type: none"> aluminium aluminium alloys steel and copper alloys 	<ul style="list-style-type: none"> grinding: (3-5%), rough turning: (3-5%), smooth turning, finishing reaming, threading: (5-8%), extrusion: (8-20%). 	Semi-synthetic concentrate (microemulsion) for universal use in metal cutting operations. Suitable for low and high pressure CNC systems. It can be used in central systems and in individual machines.
<ul style="list-style-type: none"> steel cast iron non-ferrous metals and their alloys copper and aluminium alloys 	On water with general hardness to 15°N: <ul style="list-style-type: none"> grinding: (3-4%), normal chip machining (e.g. turning, milling): (4-8%), heavy chip machining (e.g. threading): (8-10%, up to 15% for very heavy machining). 	Cooling lubricant liquid (milk emulsion) used for various machining operations.
<ul style="list-style-type: none"> steel cast iron non-ferrous metals and their alloys copper and aluminium alloys 	On water with general hardness to 15°N: <ul style="list-style-type: none"> turning, milling (5-8%), grinding: (3-5%), threading: (10-12%), plastic processing: (5-12%). 	Cooling lubricant liquid (milk emulsion) used for various machining operations on metals and their alloys, in heavy-duty operations requiring enhanced lubricating properties. The product is free of boron compounds, formaldehyde, phenol, chlorine and heavy metals.
<ul style="list-style-type: none"> steel cast iron non-ferrous metals and their alloys aluminium alloys copper alloys 		Cooling and lubricating liquid (milky emulsion) used for various types of machining operations of metals and their alloys, in particular aluminium alloys, in heavy operations requiring increased lubricating properties. The product is free of boron compounds, formaldehyde, phenol, chlorine and heavy metals.
<ul style="list-style-type: none"> steel cast iron non-ferrous metals and their alloys copper and aluminium alloys 	On water with general hardness to 15°N: <ul style="list-style-type: none"> grinding: (3-5%), turning, milling, drilling, reaming: (5-10%), threading: (10-15%). 	Cooling lubricant liquid (milk emulsion) used for various machining operations.
<ul style="list-style-type: none"> steel cast iron non-ferrous metals and their alloys copper and aluminium alloys 		Cooling lubricant liquid (milk emulsion) used for various machining operations.

Non-emulsifying oils for metal processing



Product name		Density at 15°C [g/cm ³]	Kinematic viscosity at 40°C [mm ² /s]	Pour point [°C]	Flash point [°C]	Welded load [kG]
ACP-1E		0.86	16.7	-3	148	-
ACP-2E		0.87	21.3	-15	153	-
ACP-3E		0.87	26.5	-1	159	-
ACP-1L	★	0.86	26.0	-24	225	-
ACP-2L	★	0.87	33.0	-21	230	-
FREZOL HC 800		0.90	22.8	-21	172	620
FREZOL HC 2200		-	25.0	-	-	700
FREZOL WS 8		0.88	8.0	-	125	-
FREZOL WRA 32	★	0.86	28.0	-21	220	-
FREZOL EPX 22		0.89	23.0	-15	170	450
FREZOL EPX 32		0.89	31.5	-12	230	500
FREZOL EPX 46			44.5	-12	240	500
FREZOL EP 5		0.87	5.2	-	120	-
FREZOL EP 32		0.89	33.2	-	205	-
FREZOL 22		0.87	22.0	-	-	200
FREZOL 32		0.88	30.0	-	-	200
FREZOL C 3280		0.90	55.0	-	-	>800

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





Non-emulsifying oils for metal processing

Machining processes	Product description
<ul style="list-style-type: none"> · shape turning of steel, cast iron and copper and aluminium alloys · machining of serrations by chiselling · reaming with multi-cutters · thread cutting 	Cutting oils for machining steel, cast iron, copper alloys and aluminium at high specific pressures and high cutting speeds. ACP machining oils are environmentally friendly, chloride-free, non-emulsifying metalworking oils.
<ul style="list-style-type: none"> · peripheral milling · reaming steel with a multi-blade reamer · thread cutting · rolling · shaving · dragging and shoving 	
<ul style="list-style-type: none"> · deep drilling · working on automatic machines 	
<ul style="list-style-type: none"> · drilling · rolling · threading · milling 	Cutting oils for machining steel, cast iron, copper alloys and aluminium at high specific pressures and high cutting speeds.
<ul style="list-style-type: none"> · milling (e.g. gears) · rolling · threading · reaming · shaving · chiselling and broaching 	New generation, non-emulsifying oil designed for use in heavy metalworking operations where a coolant with high lubricating film strength and high anti-wear properties is required.
<ul style="list-style-type: none"> · honing · grinding · lapping 	Oil recommended for machining steel, non-ferrous metals and carbides during heavy and medium duty machining operations. It was developed for metalworking processes where mineral-based machining oils do not work.
<ul style="list-style-type: none"> · rolling · cutting · milling · swelling · embossing 	High-quality, non-emulsifying oil dedicated to chip machining and forming of ferrous and non-ferrous alloys - in particular aluminium alloys. It has improved lubricating properties, making it recommended for more difficult machining operations on aluminium alloys.
<ul style="list-style-type: none"> · rolling · broaching · milling · chiselling · threading · reaming · cutting 	Machining oils designed for use in operations that require a coolant with a high lubricating film strength. Particularly suitable for machining hard-to-cut, stainless and acid-resistant steels.
<ul style="list-style-type: none"> · grinding · contour grinding 	Oil intended for use in high-speed grinding and shape grinding of elements made of heat-treated alloy steels.
<ul style="list-style-type: none"> · rolling · broaching · milling · chiselling 	Oil intended for use in machining processes that require a coolant with a high lubricant film strength. Recommended for machining stainless and acid-resistant steels.
<ul style="list-style-type: none"> · milling (e.g. gears) · rolling · threading 	Oils designed for use in light to medium processing operations on copper and its alloys and ferrous and non-ferrous metals.
-	Non-emulsifying concentrate for heavy metal machining, designed as an EP booster at a minimum of 10% to the oil used in the system. It guarantees improved EP properties of the system, which consequently facilitates the machining of difficult-to-machine parts.

Non-emulsifying oils for metal processing



Product name	Density at 15°C [g/cm ³]	Kinematic viscosity at 40°C [mm ² /s]	Pour point [°C]	Flash point [°C]	Welded load [kG]
FREZOL CUT 3	0.84	4.5	-66	134	-
FREZOL CUT 25	0.88	22.8	-	-	620
FREZOL CUT 25 A	0.88	23.0	-12	198	-
FREZOL CUT 32	0.88	34.4	-12	224	-
FREZOL CUT 32 A	0.88	32.0	-12	224	-
FREZOL CUT OC	0.88	15.8	-12	182	-
FREZOL CUT OC MULTI	0.88	15.8	-12	180	800
FREZOL CUT EC AL	0.87	12.5	-57	176	-
FREZOL UNICUT 22	0.88	24.8	-15	200	-
FREZOL UNICUT 32	0.89	36.7	-12	202	-
SULFOFREZOL 22	0.87	22.0	-16	162	-
SULFOFREZOL 36 ★	0.87	36.0	-15	215	-
SM METALWORKING OIL	0.87	23.3	-6	180	-
MILTRON AM 46	0.88	43.5	-18	220	250
LAPENOMIL LLE ★	0.84	8.0	-	170	-

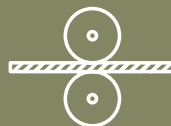
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Non-emulsifying oils for metal processing

Machining processes	Product description
<ul style="list-style-type: none"> · grinding · metal honing 	A machining oil designed for specific ferrous metal finishing work and the machining of steel and aluminium alloys.
<ul style="list-style-type: none"> · grinding · rolling · milling · drilling · threading 	Machining oil for use in high-performance grinding operations and for machining with precision tools at low to medium cutting speeds. Suitable for machining steel and non-ferrous metals. The product is not dedicated to the treatment of copper and its alloys.
	Machining oil for use in high-performance grinding operations and for machining with precision tools at low to medium cutting speeds. The product is not dedicated to the treatment of copper and its alloys.
	A versatile machining oil for a wide range of applications, both for operations with precisely defined tool geometries and for grinding. Suitable for processing steel, non-ferrous metals and yellow metals. It can be used as a multifunctional circulating oil.
	Universal machining oil with a wide range of applications, both for operations with precisely defined tool geometry and for grinding. Suitable for machining steel and non-ferrous metals. The product is not dedicated to the treatment of copper and its alloys. It can be used as a multifunctional circulating oil.
<ul style="list-style-type: none"> · rolling · milling · drilling (including deep) · internal and external threading grinding 	Oil designed for machining operations with precisely defined tool cutting geometry. Recommended even for machining materials with very poor machinability.
<ul style="list-style-type: none"> · rolling · milling · drilling · reaming 	Machining oil mainly for NC and CNC machining centres and for machining non-ferrous metals and their alloys. It provides an excellent effect of both cutting and cooling.
<ul style="list-style-type: none"> · milling · rolling · internal and external threading · drilling (including deep) 	Oils intended for machining operations with precisely defined tool tip geometry. Recommended even for machining materials with very poor machinability and for complex machining operations performed in gear manufacturing. Not suitable for processing non-ferrous metals.
<ul style="list-style-type: none"> · machining 	A depressant and sulphurised mineral oil for machining steel and cast iron at high speeds and high cutting edge temperatures, and for machining high-strength and heat-resistant steels. Not recommended for machining non-ferrous metals and where a high surface smoothness class of the workpiece material is required. Active sulphur content 0.40% (m/m).
<ul style="list-style-type: none"> · drilling · rolling · threading · milling · chiselling 	Machining oil with sulphurised mineral oils, used for the machining of steel and cast iron at high speeds and high cutting edge temperatures and for the machining of high-strength and heat-resistant steels. Not recommended for processing non-ferrous metals, especially copper and its alloys.
<ul style="list-style-type: none"> · machining · broaching · threading 	Greasing oil is used as a finished coolant for machining alloys: iron, non-ferrous metals at low cutting speeds and cutting tool cutting edge temperatures of up to 120°C.
<ul style="list-style-type: none"> · drilling · rolling · threading 	Multifunctional machining oil for lubricating and cooling tools in steel machining. It fulfils the functions of a circulating oil and its innovative technology also allows it to be used safely in the hydraulic and gear systems of processing equipment.
<ul style="list-style-type: none"> · honing · lapping · grinding 	Non-emulsifying oil for honing, lapping, grinding, final dressing of ferrous and light metals and chip machining of ferrous and non-ferrous alloys.



Product name	Density at 15°C [g/cm ³]	Kinematic viscosity at 40°C [mm ² /s]	Open cup flash point [°C]	Lubricating properties - weld load [kG]	Product description
PRESSOL PT 1	0.78	1.0	52	-	Oil mainly for use in the stamping process of painted steel sheets in roofing manufacture. 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 by brush, roller and by spraying.
PRESSOL M ★	0.80	1.4	64	-	Evaporation fluid for machining aluminium and steel sheets in stamping, punching, profiling and perforating processes. Does not stain treated surfaces.
PRESSOL WK	0.90	86.0	214	800	Lubricating and cooling oil recommended for precision extrusion and rolling processes. The product has additives that provide increased lubricating film strength, improved anti-corrosion performance and facilitate the washing process of components after machining operations.
PRESSOL ST	-	205.0	-	800	Oil for extrusion (all types of presses) and hollowing in the cold forming process. The product is recommended for all types of materials, including aluminium and copper.
DEEP STAMPING OIL	0.91	330.0	240	620	The oil is used when stamping workpieces with difficult geometries and sharp curves that require very high pressures, e.g. when stamping bath tubs, sinks made of steel, high-alloy and stainless steel cold-rolled sheets.
PLASTIC PROCESSING OIL OP-35	0.90	84.0	222	500	Forming oil used as a coolant and lubricant in the cold forging process. Product formulated on the basis of sulphurised mineral oil and additives with antioxidant and anticorrosive effects.

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Product name	Density at 15°C [kg/m ³]	Kinematic viscosity at 20°C [mm ² /s]	Kinematic viscosity at 40°C [mm ² /s]	Freezing point [°C]	Flash point [°C]	Protective properties	Product description
AKORINOL ŁT ★	826.0	4.5	-	-	75	Corrosion test on steel plates (96h, 50°C) - withstands	Oil for cleaning metal products including rolling bearing components and for intermediate corrosion protection.
AKORINOL L-5Q	835.5	5.2	3.2	-15	92	-	Oil recommended for cleaning metal products and for inter-operation anti-corrosion protection. In addition, the product washes away and dissolves lubricant-based impurities.
ANTICOL 101	872.1	-	10.8	-	174	Corrosion from inorganic salts - after 24 h - withstands	Maintenance oil recommended for temporary protection against atmospheric corrosion of components made of ferrous and non-ferrous metals. The product can be used to maintain and lubricate weapons, machinery, precision mechanisms and spare parts. Because it is compatible with fuel fractions and forms a thin film of oil films, it can serve as a preservative for engines and injection pumps.
ANTICOL M ★	881.0	-	88.0	-25	266	Corrosion from inorganic salt - after 12 hours - withstands	Protective Oil M is designed for the temporary protection of metal surfaces and steel components of gears, hydraulic and precision equipment and others except internal combustion engines and rolling bearings. The oil is not recommended for use as an anti-corrosion agent for sea transport.
ANTYKOL 100 S	891.7	-	105.9	-26	204	Corrosion from inorganic salts - after 24 h - withstands	Maintenance oil used to protect the internal surfaces of internal combustion engines, air compressors and engine pumps against corrosion.
ANTICOL ŁT ★	881.0	-	116.0	-24	270	Corrosion from inorganic salts - after 24 h - withstands	Oil designed for long-term corrosion protection. Not recommended for application on items later transported by sea.
ANTICOL TS-120	900.7	120.0*	211.8	-	220	-	Protective oil for saturating self-lubricating sintered powder bushings and plain bearing races.

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* Kinematic viscosity at 50°C [mm²/s]



Quenching oils



Product name	Kinematic viscosity at 40°C [mm²/s]	Flash point (m.p.) min. [°C]	Flash point min. [°C]	Pour point [°C]	Cooling rate [C/s]	Ash residue [%]	Acid number [mgKOH/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 steels and carburised steels, especially in closed furnaces with a controlled atmosphere, for which a high surface cleanliness of the workpieces is required. The product also works successfully in through-baths.
HARTEX 70 S	24.0	195	180	-	96	0.20	-		Low-temperature quenching oil intended for heat treatment of cast iron and steel elements, especially in closed furnaces with a controlled atmosphere, which require high cleanliness of the surface of the workpieces.
HARTEX 90S	23.8	206	185	-18	86	0.28	-		
HARTEX 120	45.0	220	200	-12	89	-	-	110-130°C	Medium-temperature quenching oil intended for heat treatment of cast iron and steel elements, especially in closed furnaces with a controlled atmosphere, which require high cleanliness of the surface of the workpieces.
HARTEX 160	220.5	240	220	-9	80	-	-	160-180°C	High-temperature quenching oil intended for heat treatment of cast iron and steel elements, especially in closed furnaces with a controlled atmosphere, which require high cleanliness of the surface of the workpieces.
HARTEX WZ	31.5*	145	-	-		0.20	0.05	40-80°C	Low-temperature quenching oil intended for heat treatment of cast iron and steel elements, especially in closed furnaces with a controlled atmosphere, which require high cleanliness of the surface of the workpieces.
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 components for which small geometrical deformations are permitted 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 components for which small geometrical deformations are permitted at the required cooling rate.
OH-150 M	66.0	215	-	-6	-	-	-	130-150°C	
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 components for which small geometrical deformations are permitted at the required cooling rate.

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*Kinematic viscosity at 20°C



Heat carriers

Product name	Density at 15°C [kg/m ³]	Kinematic viscosity at 40°C [mm ² /s]	Kinematic viscosity at 100°C [mm ² /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 medium used in closed-loop heating equipment where temperatures from -20 °C to 350 °C occur, incidentally up to 375 °C.
ITERM-4	837.9	4.1	1.5	-	-28	135	-	Heat transfer oil used in industrial cooling and heating systems, heaters and oil systems used for heating and closed-loop heating equipment.
ITERM 4 HT	851.1	19.6	4.1	107	-15	206	0.01	High-performance oil for heat exchange systems used in closed heating systems in the temperature range from -15°C to 285°C, industrial cooling and heating systems as well as heaters and oil heating systems.
ITERM 5	866.7	30.2	5.2	100	-15	226	0.01	High-tech heat carrier recommended for closed and open, oil-fired heating systems, closed industrial systems, cooling and heating systems with operating temperatures up to 315°C - 320°C (temperature in the oil mass) and for solid-fuel furnaces where additional heat extraction systems exist.
ITERM 6 MB	877.7	40.1	5.9	94	-18	236	0.24	Heat carrier recommended for use in closed heating systems in the temperature range of -10°C to 285°C, industrial cooling and heating systems, heaters and oil systems for preheating and in solid fuel furnaces where additional heat collection systems exist.
ITERM G 35 ★	877.0	-	6.0	-	-18	230	0.4	The oil is used as a heat carrier and is recommended for closed, pressure-free heating systems with oil circulation in the liquid phase at maximum volumetric 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	-	The oil is used as a heat carrier and is recommended for closed, pressure-free heating systems with oil circulation, at maximum volumetric 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 machines and devices operating at temperatures 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 systems, heaters and heating oil systems.
ITERM 100	868.3	20.1	4.4	95	-18	216	0.03	Heating oil for use as a heat carrier in heating equipment and installations where the temperature of the oil by weight does not exceed 200°C. It can be used in open systems as well as hermetically sealed systems.


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* Density at 20°C [kg/m³]

** Freezing point [°C]

Saw oils



Product name	Density at 15°C [kg/ m³]	Kinematic viscosity at 40°C [mm²/s]	Viscosity index	Pour point [°C]	Flash point (m.p.) [°C]	Product description
PILAROL EKO	0.84	63.1	200	-26	>230	Biodegradable oil for lubricating the cutting system (chain) and guides of power saws used in forestry or horticulture.
PILAROL VG 68	0.88	64.9	90	-30	>220	High-quality oil intended for lubrication of the cutting system (chain) and guides of mechanical saws used in forestry or horticulture.
*PILAROL VG 80 	0.87	84.0	-	-27	>260	
PILAROL VG 140	0.89	140.0	91	-28	>220	
PILAROL VG 150	0.89	157.4	97	-24		
PILAROL VG 220	0.89	218.7	95	-21		

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

*Product available on request

The ORLEN OIL portfolio has been expanded to include selected products from the LOTOS OIL range. These products are marked in the catalogue with the mark



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	It meets the requirements of:	Product description
ORLEN OIL TRAF O EN	0.88	10.3	1000	-60	142	66	none	PN-EN IEC 60296:2021 RIET edition 2022.	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. Contact details on page 25 of the catalogue, e-mail: serwis@orlenoil.pl



Oils for pneumatic equipment

Product name	Density at 15°C [kg/m³]	Kinematic viscosity at 40°C [mm²/s]	Pour point [°C]	Flash point (m.p.) [°C]	Appearance at 20°C	Lubricating properties - weld load [kG]	Product description
PNEUMATIC VG-32	0.88	31.2	-18	>160	Clear, without any suspended matter	-	Oil for 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, percussive pneumatic tools such as drills, pneumatic hammers, impact drills, etc.

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



Spring 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 (m.p.)	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. Contact details on page 25 of the catalogue, e-mail: serwis@orlenoil.pl



Product name	NLGI class	Type of thickener	Base oil	Base oil viscosity at 40°C [mm²/s]	Operating temperature range [°C]	Penetration after kneading at 25°C [1/10mm]	Dropping point [°C]	Colour
BENTONITE LUBRICANTS								
BENTOMOS 23	2	bentonite	mineral	230	-10÷200	260-300	> 300	dark grey, MoS ₂ additive
BENTOR 2	2	bentonite	mineral	230	-10÷200	260-300	> 300	brown
AUREN ★	1	bentonite	mineral	550	-20÷200	310-340	> 300	gold, copper additive
COMPLEX CLAY GREASES								
ALITEN EP-1	1	complex clay	mineral	150	-20÷120	305-345	> 200	brown
ALITEN EP-2	2	complex clay	mineral	150	-20÷120	260-300	> 200	brown
COMPLEX LITHIUM GREASES								
GREASEN SYNTEX HT 2	2	complex lithium	synthetic	48	-50÷180	260-300	260	brown
TYTALIT AV-395 ★	2	complex lithium	synthetic	50	-55÷180	265-295	>240	brown
TYTALIT GOLD 00 ★	00	complex lithium	synthetic	50	-55÷180	400-430	>190	dark grey, MoS ₂ additive
TYTALIT GOLD 2 ★	2	complex lithium	synthetic	50	-55÷180	265-295	>250	dark grey, MoS ₂ additive
GREASEN COMPLEX 2	2	complex lithium	mineral	100	-40÷160	260-300	260	brown
GREASEN EP-23	2	complex lithium	mineral	150	-30÷140	260-300	220	dark grey, MoS ₂ additive
LITEN PREMIUM ŁT-4EP1	1	complex lithium	mineral	150	-30÷140	310-340	250	brown
LITEN PREMIUM ŁT-4EP2	2	complex lithium	mineral	150	-30÷140	265-295	250	brown
LITEN PREMIUM ŁT-4EP3	3	complex lithium	mineral	150	-30÷140	220-250	260	brown
G-421 EP-1 LUBRICANT	1	complex lithium	mineral	120	-35÷160	310-340	>230	brown
G-421 EP-2 LUBRICANT ★	2	complex lithium	mineral	120	-35÷160	265-295	>240	brown
G-421 EP-3 LUBRICANT ★	3	complex lithium	mineral	120	-35÷160	220-250	>240	brown
SMAROL NANO Lubricant for mowers ★	2	complex lithium	mineral	100	-30÷160	260-300	230	dark grey

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

* customised penetration range

** products available on request





Product description	Additional properties
Lubricant recommended for the lubrication of rolling and sliding bearings and other friction surfaces with a constant operating temperature above 100°C, mainly in the range of 120-200°C, and with sufficiently frequent replacement or refilling up to approximately 220°C.	It is recommended for use under high, especially percussive loads and is not suitable for the lubrication of low-torque driven bearings and bearings with low radial clearance.
Lubricant recommended for the lubrication of rolling and sliding bearings and other friction surfaces with a constant operating temperature of 120°C to 200°C.	Moisture-resistant and practically non-flammable, this product is not suitable for the lubrication of low-torque driven bearings and bearings with low radial clearance.
Lubricant designed for low-power electrical contacts, bearings and guides and threaded connections exposed to high temperatures and corrosive environments. Operating temperature from -20 to 200°C, from 200 to 600°C it acts as a dry release agent.	The lubricant has very good anticorrosion properties, reduces wear and friction, resistant to aggressive gaseous media, non-flammable
Lubricants are 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 the lubricant to be pumped over long distances. Recommended for the lubrication of bearings in devices with individual systems and central lubrication systems, operating at high ambient temperatures and requiring grease to be pumped over short distances.
Lubricant for the lubrication of highly loaded 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 number of elastomers, making it possible to lubricate metal-plastic and metal-rubber friction bonds. Allows lubrication of mechanisms exposed to shock loads, vibration, high dust, moisture and water washout.
Lubricant for high-speed bearings, precision mechanisms, non-service-sealed friction centres operating up to 1200C and other heavily loaded friction associations	The lubricant contains a package of additives to provide high oxidation resistance, corrosion protection, resistance to water washout and the required lubricating properties and strength of the lubricating film.
Lubricants designed for the lubrication of various friction nodes such as bearings, toothed gears, CV joints, threaded connection operating under high loads and extreme temperatures. The lubricants are designed for heavy construction and mining equipment.	The lubricant composition provides the highest lubricating, anticorrosive and adhesive properties - enabling operation under extreme load conditions, a wide range of operating temperatures and considerable dust.
Lubricant intended for the lubrication of highly loaded rolling and sliding bearings and other mechanisms, also using central lubrication systems.	Particularly recommended for the lubrication of automotive wheel hub bearings, electric motors, hot fans, as well as guides, joints and other automotive and industrial mechanisms.
Lubricant for the lubrication of highly stressed friction associations and angular gears of cutters. It is also recommended for use where there is frequent change of direction or a combination of low movement speeds and high loads, e.g. in CV joints.	The product is a lithium complex lubricant with molybdenum disulphide (3%). Resistant to moisture, steam and weak acids and alkalis. The grease is also resistant to vibration, high pressures and shock loads.
Lubricants recommended for the lubrication of: rolling and plain bearings, also in central lubrication systems, slow-running, low- and medium-duty gears, joints and slideways of machines. It can be successfully used as a multifunctional automotive lubricant.	They are characterised by very high tribological performance and resistance to ageing. The modern additive composition also provides a higher dropping point, better low-temperature properties and higher resistance to water washout, compared to conventional lithium lubricants.
Multi-purpose, high-temperature lubricants for heavy-duty applications. Used in rolling and plain bearings, car hubs, guides and joints and other mechanisms lubricated by point or central lubrication systems. Due to their stability and robustness, they can be used for long-term and service-free lubrication under standard operating conditions.	They have excellent anti-corrosion, lubrication and oxidation resistance properties. Reduce wear and friction over a wide range of operating temperatures thanks to the permanent protective layer formed by the high adhesion of the lubricant to the substrate. They provide lubrication and corrosion protection against water ingress and guarantee high mechanical stability. They also have good sealing properties, providing protection of the friction node against dust, dirt and water.
Lubricant for the lubrication of angular gears of all types of lawnmowers and trimmers, combustion and electric. It can be successfully used at home, in the workshop and on the farm to lubricate and protect hinges, locks, threads and vehicle and machine components from corrosion over a wide temperature range.	The product contains a unique NANO formula comprising a mixture of solid nanoparticle lubricating bodies. The lubricant adheres perfectly to the lubricated surfaces, forming a durable layer resistant to high loads, moisture, acids, alkalis and very high temperatures.



Product name	NLGI class	Type of thickener	Base oil	Base oil viscosity at 40°C [mm²/s]	Operating temperature range [°C]	Penetration after kneading at 25°C [1/10mm]	Dropping point [°C]	Colour
LITHIUM LUBRICANTS								
UNILIT ŁT4 EP-00 ★	00	lithium	mineral	100	-30÷140	400-430	>180	green
UNILIT ŁT4 EP-1 ★	1	lithium	mineral	100	-30÷140	310-340	>190	green
UNILIT ŁT4 EP-2 ★	2	lithium	mineral	100	-30÷140	265-295	>195	green
UNILIT ŁT4 EP-3 ★	3	lithium	mineral	100	-30÷140	220-250	>195	green
GREASEN ŁT-4 S-2	2	lithium	mineral	100	-30÷140	265-295	200	green
GREASEN ŁT-4 S-3	3	lithium	mineral	100	-30÷140	220-250	200	green
AUTOMOTIVE LUBRICANT ŁT4 S-2 ★	2	lithium	mineral	100	-30÷120	265-295	>190	green
AUTOMOTIVE LUBRICANT ŁT4 S-3 ★	3	lithium	mineral	100	-30÷130	220-250	>195	green
LITEN ŁT-4P2	2	lithium	mineral	100	-30÷140	260-300	202	brown
LITEN ŁT-4P3	3	lithium	mineral	100	-30÷140	220-260	205	brown
LITEN ŁT-41	1	lithium	mineral	100	-30÷130	310-340	200	brown
LITEN ŁT-42	2	lithium	mineral	100	-30÷130	265-295	202	brown
LITEN ŁT-43	3	lithium	mineral	100	-30÷130	220-250	205	green
LITHIUM LUBRICANT ŁT-41 ★	1	lithium	mineral	100	-30÷130	310-340	>190	green
LITHIUM LUBRICANT ŁT-42 ★	2	lithium	mineral	100	-30÷130	265-295	>190	green
LITEN EP-0	0	lithium	mineral	150	-20÷120	355-385	190	brown
LITEN EP-1	1	lithium	mineral	150	-20÷120	310-340	200	brown
LITEN EP-2	2	lithium	mineral	150	-20÷120	265-295	200	brown
LITEN EP-3	3	lithium	mineral	150	-20÷120	220-250	200	brown
LITHIUM LUBRICANT EP-0 ★	0	lithium	mineral	100	-20÷130	355-385	>185	green
LITHIUM LUBRICANT EP-1 ★	1	lithium	mineral	100	-20÷130	310-340	>190	green
LITHIUM LUBRICANT EP-2 ★	2	lithium	mineral	100	-20÷130	265-295	>190	green
LITEN EPX-0	0	lithium	mineral	150	-20÷110	350-390	170	brown
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
** LITEN LVG 2	2/3*	lithium	mineral	50	-30÷120	240-280	> 180	dark grey, graphite additive
** LITEN LVT 2-M	1/2*	lithium	mineral	200	-25÷120	270-310	> 180	dark grey, MoS ₂ additive
CALCIUM LUBRICANTS								

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* customised penetration range

** products available on request





Product description	Additional properties
Multi-purpose lubricant for stationary and centrally lubricated rolling and plain bearings, for the lubrication of chassis components, joints, medium-duty freewheeling gears and other components.	They have excellent anti-corrosion, lubrication and oxidation resistance properties. They are resistant to leaching with hot and cold water, provide lubrication and corrosion protection when water is available.
Lubricant for the lubrication of: automotive roller bearings, spider joints during assembly, linkages and guides of machines and other machine elements, plain bearings operating in the permissible temperature range.	-
Lubricants are used for the lubrication of rolling and plain bearings and are mainly intended for agricultural machinery as well as other machinery requiring bearing grease.	Provides high oxidation resistance, corrosion protection and increased lubrication film life
Lubricants designed for the lubrication of covered rolling bearings operating under highly demanding conditions with regard to properties such as: oxidation resistance, corrosion protection, water resistance and mechanical stability.	Multifunctional products, enhanced by additives with antioxidant, anticorrosive and lubricity-enhancing properties.
Lubricants intended for lubricating rolling and sliding bearings.	Refined with a package of additives with antioxidant, anti-rust and lubricating properties. The choice of lubricant depends on the method of grease supply to the bearings (e.g. central or manual lubrication), the rotational speed and the operating temperature of the bearing.
Lubricants intended for lubrication of rolling and sliding bearings of all machines under normal operating conditions.	They reduce wear and friction and have very good anti-corrosion properties. Can be used in workshops as well as for everyday domestic use.
Lubricants recommended for the lubrication of rolling bearings operating under high loads, and also in less loaded bearings where impact loads occur.	Designed for the lubrication of bearings in devices with central lubrication systems operating at low temperatures and requiring grease to be pumped over very long distances.
	Intended for the lubrication of bearings in devices with central lubrication systems operating at moderate ambient temperatures and requiring grease to be pumped over long distances.
	Designed for the lubrication of bearings in devices with individual systems and central lubrication systems operating at high ambient temperatures and requiring grease to be pumped over short distances.
	It is designed to lubricate the bearings of equipment with an individual system.
Lubricants designed for the lubrication of rolling and plain bearings, other medium duty components including gears.	EP-0 lithium lubricant is intended for the lubrication of bearings in devices with central lubrication systems operating at low temperatures (-20°C to +10°C) and requiring grease to be pumped over very long distances.
	EP-1 lithium lubricant is intended for the lubrication of bearings in devices with central lubrication systems operating at moderate ambient temperatures and requiring grease to be pumped over long distances.
	"EP-2 lithium lubricant is designed for the lubrication of bearings of equipment with individual system and central lubrication systems operating at high ambient temperatures and requiring the pumping of lubricant over short distances."
Lubricants recommended for the lubrication of closed spur and bevel gears.	Applicable in the medium temperature range specified and with medium gear sealing.
	It is used at lower temperatures of the specified temperature range and with good gear sealing.
Lubricant used to lubricate heavily loaded friction nodes. The consistency and specially selected type of base oil allow the lubricant to be used in automotive and industrial central lubrication systems under varying temperature conditions.	Lubricant that is easily pumpable at low temperatures, reduces wear and friction, has very good corrosion and protective properties, provides lubrication when water is available, meets MAN 283 specifications.
A lubricant designed primarily for the lubrication of plain bearings operating under high pressures and dynamic stresses. It is also suitable for the lubrication of gears, pins, bushings and other mechanisms, as well as slow-running roller bearings.	Not recommended for rolling bearings with higher speeds due to the solid lubricant content.
A lubricant designed primarily for the lubrication of plain bearings operating under high pressures and dynamic stresses. It is also suitable for the lubrication of gears, pins, bushings and other mechanisms, as well as slow-running roller bearings.	Not recommended for rolling bearings with higher speeds due to the high solid lubricant content (5% MoS ₂).



Product name	NLGI class	Type of thickener	Base oil	Base oil viscosity at 40°C [mm ² /s]	Operating temperature range [°C]	Penetration after kneading at temp. 25°C [1/10mm]	Dropping point [°C]	Colour
GREASEN STP	1*	calcium	mineral	40	-20÷60	300-350	95	brown
STP LUBRICANT ★	1	calcium	mineral	100	-10÷60	300-350	>85	red
GREASEN GRAFIT	≥ 2*	calcium	mineral	100	-20÷60	>250	95	dark grey, graphite additive
GREASEN GRAFIT PLUS ★	2	calcium	mineral	100	-20÷60	260-300	>85	dark grey, graphite additive
GRAPHITE LUBRICANT 3 ★	3	calcium	mineral	100	-20÷60	215-255	>90	dark grey, graphite additive
KALTON EP-1	1	calcium	mineral	42	-20÷60	305-345	95	brown
KALTON EP-2 LUBRICANT ★	2	calcium	mineral	190	-10÷60	265-295	>90	red
MACHINE LUBRICANT 2	2	calcium	mineral	100	-10÷60	260-300	95	brown
MACHINE LUBRICANT 3	3	calcium	mineral	100	-10÷60	215-255	95	brown
MACHINE LUBRICANT 2L ★	2	calcium	mineral	100	-10÷60	265-295	>90	red
MACHINE LUBRICANT 3L ★	3	calcium	mineral	100	-10÷60	220-250	>90	red
CSW-1	1	calcium	mineral	130	0÷60	290-325	93	brown
CSW-2	2	calcium	mineral	130	0÷60	250-285	95	brown
CSW-1L ★	1	calcium	mineral	100	-10÷60	310-340	>85	red
CSW-2L ★	2	calcium	mineral	100	-10÷60	265-295	>85	red
L LUBRICANT FOR BRAKE MECHANISMS (PRG-L)	0/1*	calcium	mineral	150	0÷60	280-380	120	brown
Z LUBRICANT FOR BRAKE MECHANISMS (PRG-Z)	00*	calcium	mineral	150	-20÷60	>380	120	brown
ZL LUBRICANT FOR BRAKE MECHANISMS ★	-	calcium	mineral	100	-10÷60	380-450	>70	brown
PWR LUBRICANT ★	-	calcium	mineral	100	-	-	-	grey, zinc dust additive
LITHIUM-CALCIUM LUBRICANTS								

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* customised penetration range

** products available on request





Product description	Additional properties
It is designed exclusively for the periodic lubrication of car chassis, pins, joints, guides. Not suitable for lubrication of rolling bearings and water pump.	The soft consistency of the grease allows for easy use of pneumatic lubrication devices. It is quite resistant to cold water.
Lubricant used for the periodic lubrication of vehicle chassis, pins, joints, guides and other points. Not suitable for lubricating rolling bearings.	The lubricant ensures proper lubrication and protection when water is available.
Lubricant for lubrication of: car springs, open gears, worm gears, screw threads exposed to corrosive action, chains and other heavily loaded friction nodes. It can be used as a typical assembly lubricant.	The product is resistant to cold water. It is not suitable for the lubrication of any automotive components other than springs. Cannot be used in rolling bearings and other precision mechanisms.
Lubricants intended for lubricating spring leaves, screw threads, chains, open gears, worm gears and other heavily loaded friction nodes. Can be used as assembly lubricant. They are not suitable for lubricating rolling bearings and precision mechanisms.	Reduce wear and friction, protect against corrosion, for use in workshops as well as every-day domestic use. Particularly recommended where there is high dust, contact with water, high pressures and transverse clearances.
Lubricant for the lubrication of heavily loaded rolling bearings, particularly under impact load, also when water is present, e.g. metal rolling mills, presses, heavy construction machinery, etc.	Recommended for central lubrication systems.
Lubricant for the lubrication of rolling bearings, heavily loaded components, especially under impact load, e.g. in metal rolling mills, as well as for the lubrication of other heavily loaded bearings, e.g. in presses, crushers, heavy construction machinery. Lubricant ensures proper lubrication when water is present.	Lubricant for use in manual bearing lubrication or in lubricators located close to the friction node.
Lubricants recommended for the lubrication of plain bearings and other friction surfaces. The products are not suitable for lubricating rolling bearings.	Machine lubricant 2 is used for lubrication when fed through long, small-diameter lines.
	Machine lubricant 3 is used for lubrication when a higher sealing capacity of the bearings is required and when the lubricant is fed through larger diameter pipes and over shorter distances.
Lubricants intended for lubricating sliding bearings and other friction surfaces.	Machine Lubricant 2 is mainly used in central lubrication systems when supplying lubricant through long lubrication lines with small diameters and low ambient temperatures.
	Machine Lubricant 3 is used in central lubrication systems when lubricant is supplied through short grease lines with larger diameters when good sealing properties are required.
Recommended for the lubrication of rolling bearings in rolling cages and auxiliary equipment with a central lubrication system at operating temperatures not exceeding 60°C, as well as in other equipment operating under high and shock loads.	CSW-1 is recommended when supplying lubricant through long, small-diameter lines or at low ambient temperatures.
	CSW-2 is recommended when the lubricant lines are shorter and larger in diameter and when the sealing properties of the lubricant are required.
Lubricants for the lubrication of rolling cage bearings and sliding bearings in auxiliary equipment. Used for the lubrication of heavily loaded components operating under shock loads.	CSW-1 lubricant is mainly used in central lubrication systems when grease is supplied via long, small diameter lubrication lines at low ambient temperatures.
	CSW-2 lubricant is used in central lubrication systems when the lubricant is supplied through short lubrication lines of larger diameter and good sealing properties are required.
Seasonal lubricants for the lubrication of railway shunting equipment of brake mechanisms.	Product for use in the summer period.
	Product for use in the winter period.
Lubricant used to lubricate various types of brake mechanisms.	Grease for use in winter, ensures proper lubrication and protection in the presence of water.
The lubricant is used to seal and prevent seizure of threaded connections mainly for scrubber pipes. Specially designed for wet and saline water environments, especially in the mining industry.	The lubricant preserves components operating in brine and water environments, prevents threaded connections from seizing, in operation the lubricant exhibits very good surface adhesion characteristics, protects against rust and corrosion, is resistant to water, provides good resistance to oxidation.



Product name	NLGI class	Type of thickener	Base oil	Base oil viscosity at 40°C [mm ² /s]	Operating temperature range [°C]	Penetration after kneading at 25°C [1/10mm]	Dropping point [°C]	Colour
GREASEN N-EP 00/000	00/000*	lithium-calcium	mineral	35	-30÷90	400-460	165	brown
GREASEN S-EP 00/000	00/000*	lithium-calcium	synthetic	19	-45÷90	400-460	165	brown
LITEN LC EP-1	1	lithium-calcium	mineral	150	-35÷160	310-340	220	brown
LITEN LC EP-2	2*	lithium-calcium	mineral	150	-30÷160	270-295	245	brown
LITOCAL R 00/000 ★	00/000	lithium-calcium	vegetable oil	35	-25÷100	400-475	>110	brown
LITOCAL R 2/1 ★	2/1	lithium-calcium	vegetable oil	35	-25÷100	280-320	>140	brown
SULPHONATE LUBRICANTS								
HUTPLEX HV	1/2*	calcium sulphonate	mineral	420	-30÷180	285-315	> 300	brown
HUTPLEX WR-2	2	calcium sulfonate	mineral	180	-25÷180	265-295	> 300	brown
SULFOCAL 102 ★	2	calcium sulfonate	mineral	100	-30÷180	265-295	>300	brown
SULFOCAL 301 ★	1	calcium sulfonate	mineral	300	-30÷180	310-340	>300	brown
SULFOCAL 302 ★	2	calcium sulfonate	mineral	300	-30÷180	265-295	>300	brown
SULFOCAL 801 ★	1	calcium sulfonate	mineral	800	-30÷180	310-340	>300	brown
SULFOCAL 802 ★	2	calcium sulfonate	mineral	800	-30÷180	265-295	>300	brown
SULFOCAL GOLD 350 ★	00	calcium sulfonate	mineral	230	-30÷180	400-430	>280	dark grey, MoS ₂ additive
SPECIALITY LUBRICANTS								
SMAROL PTFE	lubricant in the form of spray	PTFE	-	-	-30÷250	-	-	white
LR STEEL ROPE LUBRICANT	4	special	mineral	420	-	-	> 55	brown
** ORLEN OIL KRONER L	-	paraffin	mineral	-	-	-	> 48	dark brown to dark green
HYDROCARBON LUBRICANTS								
KZ LUBRICANT ★	semi-fluid lubricant	carbon-hydrogen, asphalt and tetrachloroethylene additives	mineral	100	-20÷40	-	-	black
KOLINSTAL ★	5	hydrocarbon, asphalt additive	mineral	100	up to 40	100-170	>60	black
CORROSION PROTECTION LUBRICANT ★	-	carbon-hydrogen	mineral	100	up to 50	-	>60	brown

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EP - Extreme Pressure
AW - Antiwear

MoS₂ - Molybdenum disulphide

The ORLEN OIL portfolio has been expanded to include selected products from the LOTOS OIL range. These products are marked in the catalogue with the mark





Product description	Additional properties
Lubricants designed for the lubrication of friction associations in heavy commercial vehicles and buses by means of central lubrication systems. They can be used to lubricate various types of reduction gears lubricated with plastic lubricants.	The product is approved under MAN 283 Li-P 00/000. Synthetic oil-based product.
Lubricants mainly intended for the lubrication of rolling bearings operating under high loads, i.e. when: $C/P < 7$ for mainly radially loaded bearings $C/P > 15$ for mainly axially loaded bearings, and also when impact loads occur in the operation of less loaded bearings.	Intended for the lubrication of bearings in devices with central lubrication systems operating at moderate ambient temperatures and requiring grease to be pumped over long distances. Designed for the lubrication of bearings in devices with individual systems and central lubrication systems operating at high ambient temperatures and requiring grease to be pumped over short distances.
Lubricants 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 requiring the use of environmentally neutral biodegradable grease, depending on consistency requirements and performance class.	High oxidation resistance, corrosion protection and increased lubricant film strength.
High-temperature sulphonate lubricant designed for the lubrication of machine components in the mining, metallurgical, heavy industry and marine sectors, especially for friction nodes exposed to high impact loads and low torques operating under high dust and water and brine exposure conditions.	The lubricant is ideal in coal and copper mines for lubricating bearings, pin connections and other mechanisms of machinery and equipment operating in the specified temperature range. The product also proves its worth in tough metallurgical applications, for the lubrication of stand roller bearings of rolling mill cages.
High-temperature sulfonate lubricant intended for the lubrication of machine elements in the steel industry, especially roller bearings of rolling stands and other friction nodes exposed to high temperatures.	Thanks to its extraordinary thermal stability, the lubricant regains its original structure after returning to ambient temperature. Perfect for lubricating machine elements and devices in coal and copper mining, cement plants, steel industry, heavy industry and in all friction nodes exposed to extreme pressure and water.
A lubricant designed for the lubrication of heavily loaded friction nodes, especially those exposed to shock loads, dust, water and brine. Used in heavy industry, mining, metallurgy and marine industries.	The unique structure of the thickener provides extremely high resistance to temperature, wear, seizure, corrosion and oxidation. Consistency class NLGI 2 allows the lubricant to be dispensed through individual lubrication points.
Lubricants intended for the lubrication of heavily loaded friction nodes, especially those exposed to impact loads, dust, water and brine. Used in heavy, mining, metallurgical and maritime industries.	The unique structure of the thickener provides extremely high resistance to temperature, wear, seizure, corrosion and oxidation.
The lubricant provides the highest lubricating, corrosion and adhesion properties - enabling operation in extreme conditions in the presence of water and dust.	High drip temperatures allow operation over a wide temperature range while reducing lubrication frequency.
A lubricant designed to lubricate machine parts exposed to high temperatures or significant water influences. After application and drying, it leaves a protective film of oil on the lubricated parts, 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 components: plain and spherical bearings, chains - also fitted with O-Ring or X-Ring seals, cogs, sprockets, levers, slideways, linear guide systems, spindles, hinges, wire ropes, ball joints, conveyors operating in ovens and dryers.
A lubricant designed for the maintenance of steel ropes of various designs during their manufacture.	Not suitable for the lubrication of drum hoist shaft ropes or hoist ropes with Koepe drive wheel.
It is designed for temporary corrosion protection of metal products during storage and transport, particularly for protection in mild climates.	It is applied to heat in liquid form.
A lubricant designed for the lubrication of freewheeling open spur and bevel gears, main gears of rail vehicles, freewheeling and worm gears and other associations where the adhesive properties and water resistance of the lubricant are important functions.	Good adhesion and water resistance.
Lubricant for the maintenance of wire ropes, e.g. for excavators, cranes and other industrial ropes during their manufacture and operation at a temperature not exceeding 40°C. Kolinstal lubricant is also used to impregnate the cores of organic wire ropes. The lubricant must not be used for the maintenance of hoisting ropes cooperating with the system's propeller wheel - Koepe.	It has very good adhesive properties and is water-resistant.
Lubricant designed for the maintenance of armament equipment. It provides very good adhesion to the substrate and protection against corrosion and oxidation.	Provides effective protection against corrosion due to the durable protective layer formed by the high adhesion of the lubricant to the substrate.



Tab.1 Division of plastic lubricants into consistency classes according to NLGI

Lubricant consistency group	Consistency	Penetration range according to NLGI	Primary use
000	very smooth	445-475	Mechanical gearboxes
00	liquid	400-430	
0	semi-liquid	335-385	
1	very soft	310-340	Roller and plain bearings
2	soft	265-295	
3	average	220-250	
4	semi-hard	175-205	Special mechanisms
5	hard	130-160	
6	very hard	85-115	

Tab.2 Types of plastic lubricants and their characteristics

Type of grease by thickener	Distinguishing features
Lithium lubricants	<ul style="list-style-type: none"> · versatility of application · good water resistance · high durability
Calcium lubricants	<ul style="list-style-type: none"> · poor resistance to high operating temperatures · poor grip · very good water resistance
Complex clay lubricants	<ul style="list-style-type: none"> · very good temperature resistance · very good water resistance · good grip
Bentonite lubricants	<ul style="list-style-type: none"> · very good high temperature resistance · no miscibility with other lubricants · very good pumpability
Sulfonate lubricants	<ul style="list-style-type: none"> · excellent water resistance · excellent load-bearing capacity · very good temperature resistance
Complex lithium lubricants	<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]	Kinematic viscosity at 40°C [mm²/s]	Pour point [°C]	Flash point [°C]	Product description
EXTRACTION PETROL III N.A.	732.2	0	0	5	A product with low aromatic compounds, trace of benzene and sulphur content. Obtained by distillation of hydrocarbon fractions. It is characterised by a mild fragrance and excellent washing properties.

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Alphabetical product index

A					
1.	ACP-1E	36	57.	DELGAS A 15W-40	24
2.	ACP-1L	36	58.	DELGAS EXTRA 10W-40	24
3.	ACP-2E	36	59.	DELGAS L 30	24
4.	ACP-2L	36	60.	DELGAS L 40	24
5.	ACP-3E	36	61.	DELGAS M 40	24
6.	AEROMIL SYNTHETIC CLP 320	16	62.	DELGAS PREMIUM L 40	24
7.	AKORINOL L-5Q	41	E		
8.	AKORINOL ŁT	41	63.	EMULGOL DS 30	34
9.	ALITEN EP-1	46	64.	EMULGOL ES-12	34
10.	ALITEN EP-2	46	F		
11.	AMORTYZOL 15-WL 150	45	65.	FORMEX Q	33
12.	ANTYKOL 100 S	41	66.	FORMEX XS	33
13.	ANTYKOL 101	41	67.	FREZOL 22	36
14.	ANTYKOL ŁT	41	68.	FREZOL 32	36
15.	ANTYKOL M	41	69.	FREZOL C 3280	36
16.	ANTYKOL TS-120	41	70.	FREZOL CUT 25	38
17.	AUREN	46	71.	FREZOL CUT 25 A	38
B			72.	FREZOL CUT 3	36
18.	BENTOMOS 23	46	73.	FREZOL CUT 32	38
19.	BENTOR 2	46	74.	FREZOL CUT 32 A	38
20.	BENZYNIA EKSTRAKCYJNA (EXTRACTIVE PETROL) III N.A.	54	75.	FREZOL CUT EC AL	38
C			76.	FREZOL CUT OC	38
21.	CENTRACAL	48	77.	FREZOL CUT OC MULTI	38
22.	CERAMOL B	33	78.	FREZOL EP 32	36
23.	CERAMOL Q	33	79.	FREZOL EP 5	36
24.	CORALIA HC 100	21	80.	FREZOL EPX 22	36
25.	CORALIA HC 150	21	81.	FREZOL EPX 32	36
26.	CORALIA K-20	21	82.	FREZOL EPX 46	36
27.	CORALIA L-DAA 100	20	83.	FREZOL HC 2200	36
28.	CORALIA L-DAA 150	20	84.	FREZOL HC 800	36
29.	CORALIA L-DAA 220	20	85.	FREZOL UNICUT 22	38
30.	CORALIA L-DAA 46	20	86.	FREZOL UNICUT 32	38
31.	CORALIA L-DAA 68	20	87.	FREZOL WRA 32	36
32.	CORALIA L-DAB 100	20	88.	FREZOL WS 8	36
33.	CORALIA L-DAB 150	20	89.	FRIGOL M 68	21
34.	CORALIA L-DAB 32	20	90.	FRIGOL POE 100	21
35.	CORALIA L-DAB 320	20	91.	FRIGOL POE 68	21
36.	CORALIA L-DAB 46	20	92.	FRIGOL TZ-13	21
37.	CORALIA L-DAB 460	20	93.	FRIGOL TZ-19	21
38.	CORALIA L-DAB 68	20	94.	FRIGOL TZ-28	21
39.	CORALIA PAG 85	20	95.	FRIGOL WZ	21
40.	CORALIA PE 32	20	G		
41.	CORALIA PE 46	20	96.	GALKOP 100	15
42.	CORALIA PE 68	20	97.	GALKOP 150	15
43.	CORALIA ST 32	20	98.	GALKOP 46	15
44.	CORALIA ST 46	20	99.	GALKOP 68	15
45.	CORALIA ST 68	20	100.	GRAFITOL	32
46.	CORALIA T 46	20	101.	GREASEN COMPLEX 2	46
47.	CORALIA VDL 100	20	102.	GREASEN EP-23	46
48.	CORALIA VDL 32	20	103.	GREASEN GRAFIT	50
49.	CORALIA VDL 46	20	104.	GREASEN GRAFIT PLUS	50
50.	CORALIA VDL 68	20	105.	GREASEN ŁT-4 S-2	48
51.	CSW-1	50	106.	GREASEN ŁT-4 S-3	48
52.	CSW-1L	50	107.	GREASEN N-EP 00/000	52
53.	CSW-2	50	108.	GREASEN S-EP 00/000	52
54.	CSW-2L	50	109.	GREASEN STP	50
55.	CYLITEN 460 N	21	110.	GREASEN SYNTAX HT 2	46
D			H		
56.	DELGAS 10W-40	24	111.	HARTEX 120	42
			112.	HARTEX 160	42
			113.	HARTEX 70	42

Alphabetical product index

114. HARTEX 70 S	42	177. HYDROL PREMIUM HLP-D 46	10
115. HARTEX 90S	42	178. HYDROL PREMIUM HLP-D 68	10
116. HARTEX WZ	42	179. HYDROL PREMIUM HVLP-D 46	12
117. HUTPLEX WR-2	52	180. HYDROL PREMIUM L-HM 22	10
118. HUTPLEX HV	52	181. HYDROL PREMIUM L-HM 32	10
119. HYDROKOP EKO	15	182. HYDROL PREMIUM L-HM 46	10
120. HYDROKOP SEMISYNTETIC	15	183. HYDROL PREMIUM L-HM 68	10
121. HYDROKOP SYNTETIC	15	184. HYDROL PREMIUM L-HV 15	8
122. HYDROL ARCTIC L-HV 15	8	185. HYDROL PREMIUM L-HV 228	8
123. HYDROL ARCTIC L-HV 32	8	186. HYDROL PREMIUM L-HV 32	8
124. HYDROL BIO HEES EL 46	8	187. HYDROL PREMIUM L-HV 46	8
125. HYDROL BIO HETG EL 46*	8	188. HYDROL PREMIUM L-HV 68	8
126. HYDROL EXTRA HLP-D 32	10	189. HYDROL SPECIAL 46	12
127. HYDROL EXTRA L-HV 32	8	190. HYDROL SPECIAL 68	12
128. HYDROL EXTRA L-HV 46	8	191. HYDROL SYNT PE 46	8
129. HYDROL EXTRA L-HV 68	8		
130. HYDROL HEAVY L-HM/HLP 100	10	I	
131. HYDROL HEAVY L-HM/HLP 15	10	192. IBIS RDEO 40	26
132. HYDROL HEAVY L-HM/HLP 150	10	193. IBIS RDEO 50	26
133. HYDROL HEAVY L-HM/HLP 22	10	194. IBIS RDEO 60	26
134. HYDROL HEAVY L-HM/HLP 32	10	195. IBIS RDEO 70 HT	26
135. HYDROL HEAVY L-HM/HLP 46	10	196. IBIS RDEO HPD 40	26
136. HYDROL HEAVY L-HM/HLP 68	10	197. IBIS RDEO LA	26
137. HYDROL HEAVY L-HV/HVLP 100	8	198. IBIS RDEO STANDARD 40	26
138. HYDROL HEAVY L-HV/HVLP 15	8	199. ITERM 100	43
139. HYDROL HEAVY L-HV/HVLP 32	8	200. ITERM 30 MF	43
140. HYDROL HEAVY L-HV/HVLP 46	8	201. ITERM 32	43
141. HYDROL HEAVY L-HV/HVLP 68	8	202. ITERM 4 HT	43
142. HYDROL HLP-D 22	10	203. ITERM 5	43
143. HYDROL HLP-D 32	10	204. ITERM 6 MB	43
144. HYDROL HLP-D 46	10	205. ITERM G 100	43
145. HYDROL HLP-D 68	10	206. ITERM G 35	43
146. HYDROL HLPT 46	12	207. ITERM SYNT 3P	43
147. HYDROL HVLP-D 46	12	208. ITERM-4	43
148. HYDROL L-HL 100	12	K	
149. HYDROL L-HL 15	12	209. KALTON EP-1	50
150. HYDROL L-HL 150	12	210. KOLINSTAL	52
151. HYDROL L-HL 22	12	211. KONHYDR T	15
152. HYDROL L-HL 32	12	212. KONKRETON 30	33
153. HYDROL L-HL 46	12	213. KONKRETON AZ	33
154. HYDROL L-HL 68	12	214. KONKRETON BIO-BIT	33
155. HYDROL L-HM/HLP 10	10	215. KONKRETON L	33
156. HYDROL L-HM/HLP 100	10	216. KONKRETON L PLUS	33
157. HYDROL L-HM/HLP 15	10	217. KONKRETON MK S-E	33
158. HYDROL L-HM/HLP 150	10	218. KONKRETON MK S-L	33
159. HYDROL L-HM/HLP 22	10	219. KONKRETON N	33
160. HYDROL L-HM/HLP 32	10	220. KONKRETON P	33
161. HYDROL L-HM/HLP 46	10	221. KONKRETON S	33
162. HYDROL L-HM/HLP 68	10	222. KONKRETON SDA	33
163. HYDROL L-HV 100	8	223. KONKRETON SEPAR	33
164. HYDROL L-HV 15	8	224. KONKRETON V	33
165. HYDROL L-HV 22	8	225. KONKRETON V-BIO	33
166. HYDROL L-HV 32	8	226. KONKRETON VS	33
167. HYDROL L-HV 46	8	227. KONKRETON XS	33
168. HYDROL L-HV 68	8		
169. HYDROL L-HV PLUS 32	8	L	
170. HYDROL L-HV PLUS 46	8	228. L-AN 10	28
171. HYDROL L-HV PLUS 68	8	229. L-AN 100	28
172. HYDROL POWER L-HV 32	8	230. L-AN 10Z	30
173. HYDROL POWER L-HV 46	8	231. L-AN 15	28
174. HYDROL POWER L-HV 68	8	232. L-AN 150	28
175. HYDROL PREMIUM HLP-D 15	10	233. L-AN 15Z	30
176. HYDROL PREMIUM HLP-D 32	10	234. L-AN 22	28

Alphabetical product index

235. L-AN 22Z	30
236. L-AN 32	28
237. L-AN 320Z	30
238. L-AN 46	28
239. L-AN 46Z	30
240. L-AN 55	28
241. L-AN 68	28
242. L-AN 68Z	30
243. LAPENOMIL LLE	38
244. LITEN EP-0	48
245. LITEN EP-1	48
246. LITEN EP-2	48
247. LITEN EP-3	48
248. LITEN EPX-0	48
249. LITEN EPX-00	48
250. LITEN LC EP-1	52
251. LITEN LC EP-2	52
252. LITEN LVG 2	48
253. LITEN LVT 2-M	48
254. LITEN ŁT-41	48
255. LITEN ŁT-42	48
256. LITEN ŁT-43	48
257. LITEN ŁT-4P2	48
258. LITEN ŁT-4P3	48
259. LITEN PREMIUM ŁT-4EP1	46
260. LITEN PREMIUM ŁT-4EP2	46
261. LITEN PREMIUM ŁT-4EP3	46
262. LITOCAL R 00/000	52
263. LITOCAL R 2/1	52

M

264. MARINOL MW 50	27
265. MARINOL RG 10050	27
266. MARINOL RG 1030	27
267. MARINOL RG 1040	27
268. MARINOL RG 1230	27
269. MARINOL RG 1240	27
270. MARINOL RG 14050	27
271. MARINOL RG 1530	27
272. MARINOL RG 1540	27
273. MARINOL RG 2030	27
274. MARINOL RG 2040	27
275. MARINOL RG 2050	27
276. MARINOL RG 2550	27
277. MARINOL RG 3030	27
278. MARINOL RG 3040	27
279. MARINOL RG 330	27
280. MARINOL RG 350	27
281. MARINOL RG 4030	27
282. MARINOL RG 4040	27
283. MARINOL RG 4050	27
284. MARINOL RG 630	27
285. MARINOL RG 640	27
286. MARINOL RG 650	27
287. MARINOL RG 7050	27
288. MARINOL RG 8550	27
289. MILTRON AM 46	38

O

290. O.OIL OTHP3 ISO VG 32	12
291. OH-120 M	42
292. OH-150 M	42
293. OH-160 M	42

294. OH-70 M	42
295. OLEJ ANTYADHEZYJNY (ANTI-ADHESION OIL) B-0	33
296. OLEJ CYLINDROWY (CYLINDER OIL) B 28	30
297. OLEJ CYLINDROWY (CYLINDER OIL) CL-1500	30
298. OLEJ CYLINDROWY (CYLINDER OIL) CL-17 (PN-240)	30
299. OLEJ CYLINDROWY (CYLINDER OIL) CL-30 (PP-280)	30
300. OLEJ CYLINDROWY (CYLINDER OIL) CL-40 (PW-300)	30
301. OLEJ CYLINDROWY (CYLINDER OIL) P 28	30
302. OLEJ DO B.GŁĘBOKIEGO TŁOCZENIA (DEEP DRAW- ING OIL)	40
303. OLEJ DO OBRÓBK METALI (METAL PROCESSING OIL) SM	38
304. OLEJ DO OBRÓBK PLASTYCZNEJ (FORMING OIL) OP-35	40
305. OIL FOR AXLE U	30
306. OIL FOR CERAMIC PRODUCTS BQ	33
307. OIL KVG 100	32
308. OIL 1000	32
309. OIL KVG 150	32
310. OIL KVG 150 Z	32
311. OIL KVG 460	32
312. OIL KVG 68	32
313. MACHINE OIL LUBRICANT MN-11	30
314. MACHINE OIL LUBRICANT MN-15	30
315. OLEJ OKRĘTOWY (SHIP OIL) SC-22	27
316. OLEJ SEPARACYJNY (SEPARATION OIL)	33
317. OLEJ WAZELINOWY (VASELINE OIL) 17	32
318. ORLEN OIL H-515	12
319. ORLEN OIL KORON L	52
320. ORLEN OIL TRAF O EN	44

P

321. PILAROL EKO	44
322. PILAROL VG 140	44
323. PILAROL VG 150	44
324. PILAROL VG 220	44
325. PILAROL VG 68	44
326. PILAROL VG 80	44
327. PNEUMATIC VG 100	45
328. PNEUMATIC VG-32	45
329. PRESSOL M	40
330. PRESSOL PT 1	40
331. PRESSOL ST	40
332. PRESSOL WK	40

R

333. REMIZ SUPER TG 32	22
334. REMIZ SUPER TG 46	22
335. REMIZ TG 32	22
336. REMIZ TG 46	22
337. REMIZ TU 32	22
338. REMIZ TU 46	22
339. REMIZ TU 68	22

S

340. SMAR DO MECHANIZMÓW HAMULCOWYCH (LUBRI- CANT FOR BRAKE MECHANISMS) ZL	50
341. SMAR (LUBRICANT) G-421 EP-1	46
342. SMAR (LUBRICANT) G-421 EP-2	46
343. SMAR (LUBRICANT) G-421 EP-3	46
344. SMAR GRAFITOWANY (GRAPHITE LUBRICANT) 3	50
345. SMAR (LUBRICANT) KALTON EP-2	50
346. KZ LUBRICANT	52

Alphabetical product index

347. L LUBRICANT FOR BRAKE MECHANISMS (PRG-L)	50
348. SMAR LITOWY (LITHIUM LUBRICANT) EP-0	48
349. SMAR LITOWY (LITHIUM LUBRICANT) EP-1	48
350. SMAR LITOWY (LITHIUM LUBRICANT) EP-2	48
351. SMAR LITOWY (LITHIUM LUBRICANT) ŁT-41	48
352. SMAR LITOWY (LITHIUM LUBRICANT) ŁT-42	48
353. SMAR LR DO LIN STALOWYCH (LUBRICANT FOR STEEL ROPES)	52
354. SMAR MASZYNOWY (MACHINE LUBRICANT) 2	50
355. SMAR MASZYNOWY (MACHINE LUBRICANT) 2L	50
356. SMAR MASZYNOWY (MACHINE LUBRICANT) 3	50
357. SMAR MASZYNOWY (MACHINE LUBRICANT) 3L	50
358. SMAR PRZECIWKOROZYJNY DZIAŁOWY (CORROSION PROTECTION LUBRICANT)	52
359. LUBRICANT PWR	50
360. SMAR SAMOCHODOWY (AUTOMOTIVE LUBRICANT) ŁT4 S-2	48
361. SMAR SAMOCHODOWY (AUTOMOTIVE LUBRICANT) ŁT4 S-3	48
362. STP LUBRICANT	50
363. Z LUBRICANT FOR BRAKE MECHANISMS (PRG-Z)	50
364. SMAROL NANO Lubricant for mowers	46
365. SMAROL PTFE	52
366. SULFOCAL 102	52
367. SULFOCAL 301	52
368. SULFOCAL 302	52
369. SULFOCAL 801	52
370. SULFOCAL 802	52
371. SULFOCAL GOLD 350	52
372. SULFOFREZOL 22	38
373. SULFOFREZOL 36	38

T

374. TRANSGEAR EXTRA PAO 460	16
375. TRANSGEAR PAG 150	16
376. TRANSGEAR PAG 150	16
377. TRANSGEAR PAG 220	16
378. TRANSGEAR PAG 220	16
379. TRANSGEAR PAG 320	16
380. TRANSGEAR PAG 320	16
381. TRANSGEAR PAG 460	16
382. TRANSGEAR PAG 460	16
383. TRANSGEAR PAO 150	16
384. TRANSGEAR PAO 220	16
385. TRANSGEAR PAO 320	16
386. TRANSGEAR PAO 460	16
387. TRANSGEAR PE-150	16
388. TRANSGEAR PE-220	16
389. TRANSGEAR PE-320	16
390. TRANSGEAR PE-460	16
391. TRANSOL 100	18
392. TRANSOL 150	18
393. TRANSOL 220	18
394. TRANSOL 320	18
395. TRANSOL 460	18
396. TRANSOL 68	18
397. TRANSOL 680	18
398. TRANSOL CLP 100	18
399. TRANSOL CLP 150	18
400. TRANSOL CLP 220	18
401. TRANSOL CLP 320	18
402. TRANSOL CLP 460	18

403. TRANSOL CLP 68	18
404. TRANSOL CLP 680	18
405. TRANSOL EXTRA XSP 150	16
406. TRANSOL EXTRA XSP 220	16
407. TRANSOL EXTRA XSP 320	16
408. TRANSOL EXTRA XSP 460	16
409. TRANSOL GL-1	18
410. TRANSOL SP-100	18
411. TRANSOL SP-1000	18
412. TRANSOL SP-150	18
413. TRANSOL SP-220	18
414. TRANSOL SP-320	18
415. TRANSOL SP-460	18
416. TRANSOL SP-68	18
417. TRANSOL SP-680	18
418. TRANSOL V 32	15
419. TURBINEX POWER TG PREMIUM 32	22
420. TURBINEX POWER TG PREMIUM 46	22
421. TURBINEX T-30	22
422. TURBINEX TG PREMIUM 32	22
423. TURBINEX TG PREMIUM 46	22
424. TURBINOWY T-30	22
425. TYTALIT AV-395	46
426. TYTALIT GOLD 00	46
427. TYTALIT GOLD 2	46

U

428. UNICOOL AL.	34
429. UNICOOL COLOUR PLUS	34
430. UNICOOL MIKRO 40 P	34
431. UNICOOL MIKRO 40 PS	34
432. UNICOOL MIKRO 40 PW	34
433. UNICOOL MIKRO E	34
434. UNICOOL MIKRO EP	34
435. UNICOOL SEMI BF	34
436. UNICOOL WO	34
437. UNICOOL WO PRO	34
438. UNICOOL WO PRO MW	34
439. UNILIT ŁT4 EP-00	48
440. UNILIT ŁT4 EP-1	48
441. UNILIT ŁT4 EP-2	48
442. UNILIT ŁT4 EP-3	48

V

443. VELOL 10	28
444. VELOL 15	28
445. VELOL 19	28
446. VELOL 20	28
447. VELOL 50	28
448. VELOL 60	28
449. VELOL 8	28
450. VELOL 9Q	28
451. VELOL M 220	28
452. VELOL M 320	28
453. VELOL M 460	28
454. VELOL P 150	28
455. VELOL P 220	28
456. VELOL RC 100	28
457. VELOL RC 220	28
458. VELOL RC 32	28
459. VELOL RC 320	28
460. VELOL RC 46	28
461. VELOL RC 68	28



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