

# MOGUL



LUBRICATION OILS AND GREASES



**MOGUL**

PARAMO, a.s., (The Pardubice Refinery of Mineral Oils) focuses on processing of crude oil into refinery and bitumen products, lubricants and process oils, including auxiliary and secondary products.

PARAMO has two plants. Crude oil is processed in Pardubice. Hydrogenated and hydrocracked distillation cuts are processed in Kolín for production of base oils with extremely low sulphur content and lubricants.

Our lubrication oils meet the requirements of renowned machinery and equipment manufacturers, such as VW, BMW, GM, FORD, MB, VOLVO, MAN, SCANIA, RENAULT, DAF, CATERPILLAR, TATRA, TEDOM, DAEWOO AVIA, ZETOR, and others.

The MOGUL 5W-50 EXTREME Sport motor oil has been successfully tested and used in motorsport.



The refinery, which was founded in 1889, is a traditional producer of fuel, lubricants and a leading producer of bitumen and related products in the Czech Republic.

Research and manufacturing processes of fuel, lubricants, bitumen, bitumen products and paraffin at Paramo adhere to a management system that conforms to the standards of ISO 9001:2008, ISO 14001:2004, and OHSAS 18001:2007. The responsible way of doing chemistry business in the Pardubice refinery is demonstrated by its five Responsible Care and Sustainable Development awards.

## Automotive Oils

Automotive Motor Oils			
Oils for High-performance Personal Car Engines			
MOGUL	SAE	Product Specification	Performance classes, specifications
5W-30 EXTREME	5W-30	Extra-high performance synthetic motor oil for extended change intervals (Longlife III) and for automobiles with DPF filters. The oil meets special requirements for higher fuel economy as well as ecological requirements for road traffic.	ACEA A3/A5/B3/B4/C3 API SM/SL/CF/EC VW 504.00/507.00, MB 229.51
5W-50 EXTREME SPORT	5W-50	Extreme performance synthetic motor oil suitable especially for application in motorsport and racing cars. This product is recommended by Roman Kresta (a driver with World Rally Championship experience) and Roman Častoral (European Champion in Rallycross).	ACEA A3/B3/B4, API SL/CF VW 502.00/505.00
5W-40 EXTREME	5W-40	Top performance motor oil. This product guarantees high starting ability even at the lowest of temperatures and actively assists in promoting fuel economy.	ACEA A3/B3/B4 API SM/CF/EC VW 502.00/505.00, BMW Longlife, MB 229.3
5W-40 EXTREME PD	5W-40	Top performance synthetic motor oil designed especially for PD engines (Pumpe-Düse) with fixed oil change servicing intervals. This product guarantees high starting ability even at the lowest of temperatures and actively assists in promoting fuel economy.	ACEA A3/B3/B4/C3 API SM/CF VW 502.00/505.00/505.01 MB 229.31, BMW Longlife-04, Ford WSS-M2C917-A, Porsche
10W-40 EXTREME	10W-40	Top-performance semi-synthetic motor oil. This product delivers exceptional starting ability at very low temperatures, fuel economy and minimum wear of engine components.	ACEA A3/B3 API SL/CF VW 500.00/505.00
15W-40 EXTREME	15W-40	Universal all-year-round oil for modern petrol and diesel engines. This oil excels in its highly favourable ratio of price and utility value.	ACEA A3/B3 API SL/CF VW 501.01/505.00

<b>Oils for Petrol and Diesel engines of personal cars and light utility vehicles</b>			
<b>MOGUL</b>	<b>SAE</b>	<b>Product Specification</b>	<b>Performance classes, specifications</b>
RACING 5W-30	5W -30	Extreme-high performance synthetic motor oil for extended change intervals (Longlife III) and for automobiles with DPF filters. The oil meets special requirements for higher fuel economy as well as ecological requirements for road traffic.	ACEA A3/B3/B4 VW 504.00/507.00, MB 229.51
RACING 5W-30 F	5W-30	Extreme performance, low-viscosity synthetic motor oil. Special formula for FORD cars. It is suitable for engines with catalytic converters.	ACEA A1/B1 API SL FORD WSS-M2C 913-B ILSAG GF-3
RACING	5W-40	Extreme performance synthetic motor oil. This product is suitable especially for application in motorsport and racing cars. This product guarantees high startability confidence even at the lowest of temperatures and delivers high fuel economy.	ACEA A3/B3/B4 API SM/CF VW 502.00/505.00 MB 229.3, BMW LL-98 GM – LL-B-025
GX-FE	10W-40	Semi-synthetic oil for modern petrol and diesel engines. This product delivers exceptional starting ability even at very low temperatures and enhances fuel economy.	ACEA A3/B3 API SL/CF VW 500.00/505.00, MB 229.1
GX	15W-40	Universal all-year-round oil for modern petrol and diesel engines. This oil excels in its highly favourable ratio of price and utility value.	ACEA A3/B3 API SL/CF VW 501.01/505.00
FELICIA	15W-40	Universal all-year-round oil for modern petrol and diesel engines; its formula has been developed to suit Škoda cars. This product delivers an exceptionally good price utility ratio.	ACEA A3/B3 API SL/CF VW 501.01/505.00
SUPER STABIL 15W-40	15W-40	Oil for lubrication petrol and diesel engines with high to moderate requirements for oil performance.	API SF/CC
SUPER 15W-50	15W-50	For petrol and diesel engines with moderate requirements for oil performance.	API SE/CC
SPECIAL 20W-30	20W-30	Oil for lubrication of older types of petrol or diesel engines with moderate to lower requirements for oil performance.	API SC/CB
M 6 AD	40,30	Oil for lubrication of older petrol and naturally-aspired diesel engines with moderate to lower lubricant performance requirements.	API SC/CB
M 6 A	30	For lubrication of old petrol engines with low requirements for lubricant utility value; in exceptional cases for modest diesel engines as well.	API SB



<b>Diesel Engine Oils</b>			
<b>MOGUL</b>	<b>SAE</b>	<b>Product Specification</b>	<b>Performance classes, specifications</b>
DIESEL L-SAPS	10W-40	Synthetic oil for lubrication of diesel engines operating under extreme load that require Low-SAPS oils (low content of sulphate ash, phosphor, and sulphur). This product enables meeting of the strict emission limits of EURO IV and V; it also guarantees extended drain intervals.	ACEA E7/E6/E4 API CI-4 MB 228.5/228.51, MAN M3277/M3477, Volvo VDS 3, DAF Long Drain, Renault RXD, MTU Type 3/Type 3.1
DIESEL CNG	10W-40	Semi-synthetic oil designed especially for all-year-round lubrication of truck and bus engines that operate under extreme load and combust compressed natural gas (CNG).	ACEA E7/E6/E4, MB 228.51 MAN M3477, Volvo VDS-3, Scania Low Ash, RV RXD
DIESEL DTT PLUS	10W-40	Semi-synthetic oil for lubrication of diesel engines with the highest requirements for lubricant performance guarantees to achieve very long oil change intervals. The product allows meeting of the EURO I, II, III, IV and V emission limits and possesses exceptional rheological properties under low temperatures.	ACEA E4/E7 API CI-4 MB 228.5, MAN M3277, Volvo VDS 3, DAEWOO AVIA, Tatra TDS 40/16, TEDOM 258-4, ZETOR, Cummins 20078, Renault Truck RXD/RLD-2
DIESEL ULTRA	5W-30	Synthetic low-viscosity motor oil for lubrication of highly supercharged diesel engines of trucks and utility vehicles. The product allows meeting of the EURO I, II and III emission limits and possesses exceptional properties under low temperatures. Effectively enhances fuel economy.	ACEA E4 API CF MB 228.5, MAN M3277, Volvo VDS 2, RENAULT RXD
DIESEL DTT EXTRA	15W-40	For supercharged diesel engines of trucks, buses and construction machinery that operate under extreme load. The ideal application of this product is for modern engines that require oils with extreme performance properties (long-distance freight, rough terrain, etc.). This product enables achieving the servis intervals and meeting the strict emission limits of EURO I, II and III.	ACEA E7/B3/B4/A3 API CI-4 Plus/SL MB 228.3, MAN M3275, Volvo VDS 3, Cummins 20076/7/8, CAT ECF 1, DHD-1
DIESEL DTT	15W-40	For supercharged diesel engines of trucks, buses and construction machinery that operate under extreme load. The ideal application of this oil is for modern engines that require oils with extreme performance properties (long-distance freight, rough terrain, etc.). This produkt enables achieving the servis intervals and meeting the strict emission limits of EURO I, II and III.	ACEA E3/B3/B4/A3 API CG-4/SL MB 228.3, MAN M3275, Volvo VDS 2, MTU Type 2, DAEWOO AVIA, RENAULT VI RD, Tatra TDS 40/16, TEDOM 258-3
DIESEL DT	15W-40	For diesel engines (also highly supercharged) in trucks, buses, train engines, ships, modern heavy machinery in construction, forestry, agriculture, light utility vehicles, etc. The product suppresses wear, corrosion and high temperature sludge formation even when lower-quality fuel is used (i.e. fuel with higher sulphur content). This product allows meeting of the strict emission limits of EURO I, II and III.	ACEA E2/B3/B4/A3 API CG-4/SL MB 228.1/ 229.1, MAN 271, MTU Type 1, Volvo VDS, TEDOM 258-2, DAEWOO AVIA, Tatra TDS 30/12, ZETOR
M 7 ADS III 20W-40	20W-40	For diesel engines (both naturally-aspirated or supercharged) of cars, trucks, buses, train engines and other modern machinery that require high-performance oils.	API CF-4/SG MB 227.1
M 7 ADS III 20W-50	20W-50	For diesel engines (both naturally-aspirated or supercharged) of cars, trucks, buses, train engines and other modern machinery that require high-performance oils.	API CF-4/SG MB 227.1
M 6 ADS II PLUS	30	For lubrication of naturally-aspirated, supercharged or highly supercharged diesel engines that operate under high loads.	API SF/CD
MARINE	40	For lubrication of stationary diesel engines (e.g. power plants for backup supply of electricity) and for diesel engines in ships.	API CD New Sulzer Diesel

Oils for Mixed Fleet			
MOGUL	SAE	Product Specification	Performance classes, specifications
OPTIMAL	10W-40	Semi-synthetic oil for four-stroke petrol and diesel engines in modern cars, trucks and utility vehicles with exceptional requirements for oil performance. This product enhances good starting ability and reduces fuel consumption – a true long-life universal oil.	ACEA E7/E5/E3/B3/B4/A3 API CI-4/SL MB 228.3/229.1, Volvo VDS-3, MAN M3275, SCANIA LDF-2, Cummins 20076/7/8, TATRA TDS 40/16, MTU Type 2, CAT ECF-1, Renault RLD

Tractor Oils			
MOGUL	SAE	Product Specification	Performance classes, specifications
TRAKTOL STOU	10W-30	This STOU (Super Tractor Oil Universal) for modern tractors is an universal oil for lubrication of diesel engines (naturally-aspirated or supercharged), manual transmission, hydraulic systems and wet brakes.	ACEA E2 API CF/CF-4/SF, API GL-4 MB 228.1, Allison C-4, John Deere JDM 27, MAN 271, MASSEY FERGUSON CMS 1139/44/45, ZETOR, ZF TE-ML 06B/06C/06D





Gas Engine Oils			
MOGUL	SAE	Product Specification	Performance classes, specifications
MOGULGAS	15W-40	For engines combusting natural gas (CNG, LNG), LPG and certain purified biogases. Also suitable for gas engines that combine combustion of gas and diesel or petrol.	API CF TEDOM 61-0-0281 – 1 a 2 ČKD Hořovice
MOGULGAS B	15W-40	For stationary gas engines that drive power generators, gas cogeneration units, etc., especially in biomass systems; the product has a higher TBN content and therefore guarantees neutralisation of acid fumes from combustion of biogas or gas with elevated sulphur content.	API CF TEDOM 61-0-0281.1 ČKD Hořovice

Oils for Light Gardening Machinery			
MOGUL	SAE	Product Specification	Performance classes, specifications
ALFA 4 T	10W-30	For high-speed four-stroke petrol and diesel engines of gardening and agriculture machinery, power stations, etc. that require all-year-round motor oil.	ACEA A3/B3 API SL/CF
ALFA	30	For high-speed four-stroke petrol and diesel engines of small gardening and agriculture machinery that require monograde motor oil.	ACEA A3/B3 API SJ/CF

Loss Lubrication Oils			
MOGUL	SAE	Product Specification	Performance classes, specifications
ALFA HOBBY	100	Oil with high protection against wear, suitable for all loss lubrication applications in high-load chains, pins, joints, pressure and guiding elements, etc.	
ALFA BIO	46, 68	Biologically degradable oils for lubrication of chain saw blades, with excellent protection against wear.	

Two-stroke Engine Oils			
MOGUL	SAE	Product Specification	Performance classes, specifications
TSF	-	Semi-synthetic motor oil for high-speed, high-thermal load two-stroke engines (especially in chainsaws, trimmers, edgers, motorcycles, etc.).	API TC JASO FD, TISI, ISO-L-EGD/OEM Husqvarna 346 test
ALFA 2T	-	Semi-synthetic motor oil for high-speed, high-thermal load two-stroke engines (especially in chainsaws, trimmers, etc.).	API TC JASO FD
TS	40	For two-stroke petrol engines with thermal load (motorcycles, cars, agriculture and forestry machinery, etc.), complies with lubrication requirements in the most powerful of today's two-stroke engines.	API TC JASO FC
2T	40	For two-stroke engines that have lower to intermediate requirements to oil performance (older motorcycles, cars, etc.).	API TB
2T	20W-30	For two-stroke engines that have lower to intermediate requirements to oil performance (older motorcycles, cars, etc.). This product is recommended especially at low temperatures.	API TB JASO FB





## Automotive Gear Oils

Gear Oils			
MOGUL	SAE	Product Specification	Performance classes, specifications
SYNTRANS 75W-90 HYP	75W-90	Synthetic oil designed for lubrication of most types of transmission gears that operate under extreme load (final drive and hypoid gearbox with manual or other type of gear selection). Suitable as all-year-round oil for a wide range of operating temperatures.	API GL 5 TATRA TDS 100/40
TRANS 80W-90 H	80W-90	For manual gearboxes and drives that operate under high load (hypoid final drivers, worm gears, etc.). Suitable as all-year-round oil for a wide range of operating temperatures.	API GL 5 MAN 342 Typ M1, MIL-L-2105D
TRANS 80W-140 H	80W-140	For manual gearboxes and drives that operate under high load (hypoid final drives, worm gears, etc.). Suitable as all-year-round oil for an extreme range of operating temperatures.	API GL 5 MIL-L-2105D
TRANS 85W-140 H	85W-140	For manual gearboxes and drives that operate under high load (hypoid final drives, worm gears, etc.). Suitable as all-year-round oil for a very wide range of operating temperatures.	API GL 5 ZF TE-ML 05A, 07A a 12A, MIL-L-2105D
TRANS 80W H	80W	For manual gearboxes and drives that operate under high load (hypoid final drives, worm gears, etc.). Suitable as winter or all-year-round oil.	API GL 5 TATRA TDS 60/24, MIL-L-2105D
TRANS 90 H	90	For manual gearboxes and drives that operate under high load (hypoid final drives, worm gears, etc.). Suitable as summer, often as all-year-round oil.	API GL 5 MAN 342 Typ M1, MIL-L-2105D
MOGUL TRANS 90 HT	90	For transmissions operating under heavy load, especially gearboxes with hypoid assembly; typical application - lubrication of ČKD tramway (hypoid transmissions (all-year-round)).	API GL 5 ČKD Tatra
TRANS 80W-90	80W-90	For manual gearboxes and final drives in modern cars and other machinery. Wide-range transmission oil for a wide range of operation temperatures.	API GL 4 MIL-L-2105, ZF TE-ML 02A a 08A
TRANS 85W-140	85W-140	For manual gearboxes and final drives in modern cars and other machinery. Wide-range transmission oil for all operation temperatures.	API GL 4 MIL-L-2105
SYNTRANS 75W-90	75W-90	Synthetic oil for manual gearboxes and final drives in modern cars and other machinery. Wide-range transmission oil for a very wide range of operating temperatures; shows very good price-utility ratio.	API GL 4 +
TRANS 75W	75W	For modern automotive gearboxes and final drives that require low viscosity oil all year round.	API GL 4 VW 726Y, MIL-L-2105
TRANS 80	80	For manual gearboxes and final drives in modern cars and other mobile machinery. In the case of industry application: suitable as winter and all-year-round oil.	API GL4 MAN 341 Typ Z1 a E1, MIL-L-2105
TRANS 90	90	For manual gearboxes and final drives in modern cars and other mobile machinery. In the case of industry application: suitable as summer and often as all-year-round oil.	API GL 4 MIL-L-2105

Automatic Transmission Oils			
MOGUL	SAE	Product Specification	Performance classes, Specifications
TRANS ATF D III		Operating fluid for automatic transmission systems in cars or for other mobile or industrial hydraulic systems, where this type of oil has been recommended.	GM Dexron III G, Allison C4, Ford Mercon, Voith 55.6335 (DIWA a Midimat), Caterpillar TO-2, ZF TE-ML 02F, 04D, 17C, ZF Lenksystem TE-ML 09A, 09B, MAN Standard Type F
TRANS ATF D II		Operating fluid for automatic transmission systems in cars or for other mobile or industrial hydraulic systems, where this type of oil has been recommended.	GM Dexron II D, Allison C4 Ford Mercon, Voith G 607 ZF TE-ML 11A
OTHP 3	ISO VG 32	Operating fluid for selected types of hydrodynamic clutches, converters and hydrodynamic transmission systems of certain trucks, buses, construction site machinery, etc.; it is also used in industrial applications.	GM Type C3 Voith Turbo T, TP, DTP, S, R „VIR“

Tractor Oils			
MOGUL	SAE	Product Specification	Performance classes, Specifications
TRAKTOL UTTO	80W	Oil for all-year-round lubrication of transmission units of modern, high-performance tractors that require special oils or in other agriculture, forestry, construction or other types of machinery. This product may be used as general lubrication oil to serve manual transmission systems (with gears selected manually also under load – “power shift”), hydrostatic systems and so-called “wet brakes”. It enables significant reduction of the range of lubricants to be used.	API GL-4, ISO VG 68, ZETOR JOHN DEERE J20C MASSEY FERGUSON CMS M1141/ CMS M1143, FORD M2C 86C CNH MAT 3525, ZF TE-ML-03E/ TE-ML-05F

Automotive Oils, Other			
Shock Absorber Oil			
MOGUL	ISO VG	Product Specification	Performance classes, Specifications
SILENCE 15	15	Especially for piston shock absorbers of cars and trucks, hydraulic lifting equipment, brake load regulators, etc. The product is also suitable for high-pressure hydrostatic systems of mobile or stationary equipment with high mechanical and thermal load and with high requirements for positive (low) viscosity and temperature relation.	ISO 6743/4 - HV 15 DIN 51524 část 3 - HVLP 15 ATESO



## Industrial Oils

Hydraulic Oils			
MOGUL	Product Specification	Classification ISO 6743	Classification DIN 51 502
HV 32	Hydraulic oil for systems operating at low temperatures (winter, or all-year-round operation).	HV 32	HVLP 32
HV 46	Hydraulic oil for hydraulic systems operating under typical conditions (all-year-round operation).	HV 46	HVLP 46
HV 68	Hydraulic oil for hydraulic systems operating at temperatures ranging from high to very high (continuous operation in summer).	HV 68	HVLP 68
HM 32 S	Long-life hydraulic oil for hydrostatic systems with extended life. For systems operating at low temperatures (winter, or all-year-round operation).	HM 32	HLP 32 CLP 32
HM 46 S	Long-life hydraulic oil for hydrostatic systems with extended life. For hydraulic systems operating under typical conditions (all-year-round operation).	HM 46	HLP 46 CLP 46
HM 68 S	Long-life hydraulic oil for hydrostatic systems with extended life. For systems operating at high temperatures (operation in summer).	HM 68	HLP 68 CLP 68
HM 46 ZF	Zinc free oil for hydrostatic systems of both stationary and mobile machinery that operate under very high mechanic and thermal load and that run in unprotected environments. These oils bring excellent water separability, very good air-release property and superior hydrolytic stability.	HM 46	HLP 46
H-LPD 46 ZF	Zinc free oil with dispersant-detergent effect for hydrostatic systems operating under very high mechanic and thermal load. The special component allows dispersion of limited amount of water, oxidation products (sludge) and other impurities that results in higher cleanliness of the hydraulic system especially with long-term oil fills.	HM 46	H-LPD 46 MAN N 698 H-LPD 46
HM 10	Long-life hydraulic oil for hydrostatic systems – special applications for extremely low temperatures.	HM 10	HLP 10
HM 22	Hydraulic oil for hydrostatic systems operating at very low temperatures (winter operation).	HM 22	HLP 22
HM 32	Hydraulic oil for hydrostatic systems operating at low temperatures (winter or all-year-round operation).	HM 32	HLP 32
HM 46	Hydraulic oil for hydrostatic systems - hydraulic systems operating under typical conditions (all-year-round operation).	HM 46	HLP 46
HM 68	Hydraulic oil for hydrostatic systems operating at high temperatures (summer operation).	HM 68	HLP 68
HM 100	Hydraulic oil for hydrostatic systems operating at extremely high temperatures, for special applications.	HM 100	HLP 100
H-LPD 22	Hydraulic oil with detergent-dispersant component for hydrostatic systems operating at very low temperatures (winter operation).	HM 22	H-LPD 22
H-LPD 46	Hydraulic oil with detergent-dispersant component for hydrostatic systems - hydraulic systems operating under typical conditions (all-year-round operation).	HM 46	H-LPD 46
H-LPD 68	Hydraulic oil with detergent-dispersant component for hydrostatic systems operating at high temperatures (summer operation).	HM 68	H-LPD 68
ON 1	Naphtenic raffinate based oil for hydraulic systems of quick-closing valves of water turbines, exceptionally for hydraulic systems of modern machinery - only in winter seasons at very low temperatures.	HH 15	

Spindle Oils			
MOGUL	Product Specification	Classification ISO 6743	Classification DIN 51 502
SPIN 3	For high-speed spindles with sliding components, especially in grinding machines (replacement for OL - P03)		
SPIN 5	For spindles requiring low viscosity.	HM 5	HLP 5 CL 5
SPIN 10	For spindles.	HM 10	HLP 10 CL 10

Bearing Oils			
MOGUL	Product Specification	Classification ISO 6743	Classification DIN 51 502
LK 10	For high-speed spits in textile industry and for high-speed spindles in machining equipment with rolling bearings.	FC 10	AN 10 CL 10
LK 22	For bearings and gears in machines with low to moderate load; undemanding hydrostatic systems.	FC 22	AN 22 CL 22
LK 32	For bearings and gears in machines (usually textile production or machining) with low to moderate load, for undemanding hydraulic systems.	FC 32	AN 32 CL 32
LK 46	For bearings and gears in larger machines (usually in machining applications) with low to moderate load, for undemanding hydrostatic systems and steel hardening baths.	FC 46	AN 46 CL 46
LK 68	For moving mechanical parts of operating and driving machinery with low speeds and higher mechanical load.	FC 68	AN 68 CL 68
LK 100		FC 100	AN 100 CL 100
B1	Useful as washing liquid during oil changes in certain circulation systems, also for technical purposes.	AN 15	AN 15
B2		AN (22)	AN (22)
B4	For undemanding friction spots (sliding ways, rolling bearings, gears, etc.) that typically use "loss lubrication".	AN 46	AN 46
B5		AN (68)	AN (68)
B7		AN (100)	AN (100)

Low-pourpoint Bearing Oils			
MOGUL	Product Specification	Classification ISO 6743	Classification DIN 51 502
OLN 22	For systems operating at very low temperatures (winter operation).	HH 22 AN 22	
OLN 32	For systems operating at low temperatures (winter, or all-year-round operation).	HH 32 AN 32	
OLN 46	For hydraulic systems operating under typical conditions (all-year-round operation).	HH 46 AN 46	

Slideway Oils			
MOGUL	Product Specification	Classification ISO 6743	Classification DIN 51 502
GLISON 46	For lubrication of sliding surfaces of machining equipment. This product prevents from "stick-slip" effect at low speeds and high load.	G 46	CG 46
GLISON 68		G 68	CG 68
GLISON 100	For ultimate requirements for lubrication of sliding surfaces (low sliding speeds, etc.) and certain specific applications. Prevents "stick-slip" effect.	G 100	CG 100
GLISON 220		G 220	CG 220
GLISON 320		G 320	CG 320

<b>Turbine oils</b>			
<b>MOGUL</b>	<b>Product Specification</b>	<b>Classification ISO 6743</b>	<b>Classification DIN 51 502</b>
TB 32 EP	For circulating lubrication systems of steam, gas turbines and compressors that share the oil filling with the gears where oil with increased efficiency of the lubrication film is required (FZG Test A/8.3/90 > 8).	TSA/TSE 32 TGB/TGE 32 HL 32	TD 32 HL 32 CL 32
TB 46 EP		TSA/TSE 46 TGB/TGE 46 HL 46	TD 46 HL 46 CL 46
TB 32 S	For lubrication systems of steam or gas turbines and turbo-compressors. These products deliver excellent oxidation stability; their life expectancy outlasts the MOGUL TB group oils by more than double.	TSA 32 TGB 32 HL 32	TD 32 HL 32 CL 32
TB 46 S		TSA 46 TGB 46 HL 46	TD 46 HL 46 CL 46
TB 68 S	Oil for lubrication of oil turbines. This product delivers excellent oxidation stability; its life expectancy outlasts the MOGUL TB group oils by more than double.	TSA 68 TGB 68 HL 68	TD 68 HL 68 CL 68
TB 32	Oils for lubrication of steam or gas turbines and turbocompressors.	TSA 32 TGB 32 HL 32	TD 32 HL 32 CL 32
TB 46		TSA 46 TGB 46 HL 46	TD 46 HL 46 CL 46
TB 68	Oil for water turbines	TSA 68 TGB 68 HL 68	TD 68 HL 68 CL 68

<b>Compressor Oils</b>			
<b>Air and Gas Compressor Oils</b>			
<b>MOGUL</b>	<b>Product Specification</b>	<b>Classification ISO 6743</b>	<b>Classification DIN 51 502</b>
KOMPRIMO VDL 46	For rotating - screw compressors operating under higher loads (output temperature of 100 °C) also for turbocompressors.	DAJ 46	VDL 46
KOMPRIMO VDL 68		DAJ 68	VDL 68
KOMPRIMO VDL 100	For air and gas compressors operating under high load (output temperature up to 220 °C) especially in case where oils with lower performance fail to deliver e.g. by formation of deposits, carbon layers, etc.	DAC 100	VDL 100
KOMPRIMO VDL 150		DAC 150	VDL 150
KOMPRESO K 100	For lubrication of compressors with output temperature up to 160 °C.	DAA 100	VBL 100
KOMPRESO K 150	For output temperatures ranging from 160 to 200 °C.	DAA 150	VBL 150
KOMPRESO K 220	For output temperatures above 200 °C.	-	VBL 220
KOMPRESO K 320	Especially for industrial transmissions.	-	-

<b>Refrigeration Compressor Oils</b>			
<b>MOGUL</b>	<b>Product Specification</b>	<b>Classification ISO 6743</b>	<b>Classification DIN 51 502</b>
ON-3	Oils for refrigeration compressors. For ammonia compressors operating under moderate load (output temperature below 100 °C, sump temperature below 50 °C).	DRA 32	KA 32
ONF 46	For screw ammonia compressors.	DRA 46	KC 46
KOMPRIMO ONC 68	For piston ammonia compressors.	DRA 68	KA 68 KC 68

Multipurpose Oils			
MOGUL	Product Specification	Classification ISO 6743	Classification DIN 51 502
MULTI 46	These oils are designed for lubrication of gears, hydraulic circuits bearings and sliding surfaces of modern machining equipment operating under demanding conditions that may benefit from the several purposes as well as the quality of these oils.	G 46 HM 46 CKC 46	CGLP 46 HLP 46 CLP 46
MULTI 68		G 68 HM 68 CKC 68	CGLP 68 HLP 68 CLP 68
MULTI 100		G 100 HM 100 CKC 100	CGLP 100 HLP 100 CLP 100
MULTI 150		G 150 HM 150 CKC 150	CGLP 150 HLP 150 CLP 150
MULTI 220		G 220 HM 220 CKC 220	CGLP 220 HLP 220 CLP 220

Industrial Gear Oils			
MOGUL	Product Specification	Classification ISO 6743	Classification DIN 51 502
INTRANS 100	For all types of gearbox systems that operate under high levels of load and use a wide range of speeds; for lubrication of bearings and other machine components with high requirements for antiwear properties of oil.	CKC 100	CLP 100
INTRANS 150		CKC 150	CLP 150
INTRANS 220		CKC 220	CLP 220
INTRANS 320	For low-speed, high-load gears (spur, bevel, worm gears), for lubrication of low-speed bearings and other machine components with high requirements for antiwear properties of oil.	CKC 320	CLP 320
INTRANS 460		CKC 460	CLP 460

Chain Lubricating Oils			
MOGUL	Product Specification	Classification ISO 6743	Classification DIN 51 502
ŘETĚZOL 68	For lubrication of chains operating at low temperatures.		
ŘETĚZOL 100	For lubrication of chains - typical operating temperatures.		
ŘETĚZOL 150	For lubrication of chains operating at higher temperatures.		

Special Purpose Oils			
Transformer Oils			
MOGUL	Product Specification	Classification ISO 6743	Classification DIN 51 502
TRAFO CZ	Inhibited transformer oils for transformers of all voltage levels, including equipment operating under excessive load.		
TRAFO CZ-A			
TRAFO D	Non-inhibited transformer oil for equipment with high requirements.		

<b>Mould Release Oils</b>			
<b>MOGUL</b>	<b>Product Specification</b>	<b>Classification ISO 6743</b>	<b>Classification DIN 51 502</b>
MK S MK-5 MKS-L	These products are designed as mould release oils for applications in ceramics or cement industries, construction, etc. For separation of metal, plastic, ceramic and wood chip moulds.		
MK S IDEAL	For separation of moulds in production of wood-cement boards in combination with polystyrene or mineral fibres.		

<b>Hydraulic Oils</b>			
<b>Biologically Degradable</b>			
<b>MOGUL</b>	<b>Product Specification</b>	<b>Classification ISO 6743</b>	<b>Classification DIN 51 502</b>
HESS 32	Biologically degradable synthetic hydraulic oils designed for hydrostatic systems that operate under high load all-year-round (temperatures from -20 to 80 °C, for short periods up to 90 °C) where the useful life is assumed similar as to application of type HV or HM mineral oils.	HM 32 VDMA HEES 32	HLP 32
HESS 46		HM 46 VDMA HEES 46	HLP 46

<b>Lubricating greases</b>					
<b>Lubricating greases for Mobile Machinery and Equipment</b>					
<b>MOGUL</b>	<b>Type of Thickener</b>	<b>Product Specification</b>	<b>Classification ISO 6743</b>	<b>Classification DIN 51 502</b>	<b>Temperature range of application (°C)</b>
LA 2	Li soap	For lubrication of rolling and plain bearings of mobile machinery, possibly for other applications (lubrication of gears, etc).	CCEB 2	KP2K-30	-30 to 120
LA2 D	Li soap	For lubrication of rolling and plain bearings of mobile machinery, possibly for other applications (lubrication of gears, etc.). This lubricant delivers increased adhesiveness.	CCEB 2	KP2K-30	-30 to 120
LA 00	Li soap	Semi-fluid lubricating grease with high pressure properties and good flow properties at low temperatures; this product is designed for use in central lubrication systems of trucks, buses and other machinery.	CBEB 00	GP00G-35	-35 to 100
A 00	Al soap	Highly adhesive semifluid grease designed for central pressure lubrication systems, some low-speed gearboxes, chains, etc.	BBHA 00	G00G-20	-20 to 90
PZ0 P	Li soap	This lubricant is primarily designed for use in gearboxes.	BBEA 0	G0E-20	-20 to 90
LP 00	Li soap	For final drives of train engines or for lubrication of other encased gearboxes (product contains graphite).	BBEB 00	GP00E-20	-20 to 90

Industrial Lubricating Greases					
MOGUL	Type of Thickener	Product Specification	Classification ISO 6743	Classification DIN 51 502	Temperature range of application (°C)
A 4	Ca soap	In general for all fits exposed directly to water.	CAHA 4	K4E-25	-25 to 80
N 000	Ca soap	Semifluid lubricating grease for central lubricating systems.	CAEA 000	K000C-30	-30 to 60
LV 1	Li soap	For lubrication of rolling and plain bearings or other large moving parts; the universal nature of these products gives them a wide range of application .	CCEA 1	K1K-30	-30 to 120
LV 2-3	Li soap	For lubrication of rolling and plain bearings or other large moving parts; the universal nature of these products gives them a wide range of application conditions. Product unsuitable for central lubrication systems.	CCEA 2/3	K2/3K-30	-30 to 120
LVS 1	Li soap	For lubrication of rolling and plain bearings or other moving components operating under common conditions.	BCEA 1	K1K-25	-25 to 120
LVS 2	Li soap	For lubrication of rolling and plain bearings or other moving components operating under common conditions; higher viscosity of base oil against MOGUL LV 2-3.	BCEA2	K2K-25	-25 to 120
LVS 3	Li soap	For lubrication of rolling and plain bearings or other moving components operating under common conditions; higher viscosity of base oil against MOGUL LV 2-3.	BCEA3	K3K-25	-25 to 130
LV 00 EP	Li soap	For lubrication of transmissions that require semifluid lubricating grease, for rolling and plain bearings and gliding surfaces. Suitable for central lubrication systems in both mobile and industrial applications.	CBEB 00	GP00G-25	-25 to 120
LV 1-EP	Li soap	For lubrication of high-load rolling and plain bearings or other moving components operating under high load.	CCEB 1/2	KP1/2K-30	-30 to 120
LV 2 EP	Li soap	For lubrication of high-load rolling and plain bearings or other moving components operating under high load. Product unsuitable for central lubrication systems.	CCEB 2/3	KP2/3K-30	-30 to 120
LV 2-EPS	Li soap	For lubrication of high-load rolling and plain bearings or other moving components operating under high load. Product unsuitable for central lubrication systems.	CCEB 3	KP3K-30	-30 to 120
LVT 1-EP	Li soap	High pressure lubricating grease with higher viscosity of base oil for applications in rolling and plain bearings; product suitable for central lubrication systems with long lube pipes.	BCEB 1	KP1K-20	-25 to 120
LVT 2-EP	Li soap	High pressure lubricating grease with higher viscosity of base oil for applications in rolling and plain bearings.	BCEB 2	KP2K-20	-25 to 120
LV 2 WR	Li soap	High pressure lubricating grease resistant to water washing designed for lubrication of rolling and plain bearings which are subject to excessive splashing of water.	BCHB 2	KP2K-20	-20 to 120
LV 2-M	Li soap	For lubrication of high-load rolling and plain bearings or other moving components operating under high load. For cases that require "emergency" properties of the lubricant, the product contains MoS <sub>2</sub> .	CCEB 2/3	KF2/3K-30	-30 to 120
LVT 2M	Li soap	For applications identical to MOGUL LV 2-M, with higher viscosity of the base oil, higher content of MoS <sub>2</sub> and with adhesive agent.	BCEB 2	KFP2K-25	-25 to 120
LVG 2	Li soap	Especially for lubrication of high-load rolling and plain bearings or other moving components operating under high load. The product contains graphite.	CCEA 2/3	KF2/3K-30	-30 to 120

Lubricating Greases					
MOGUL	Type of Thickener	Product Specification	Classification ISO 6743	Classification DIN 51 502	Temperature range of application (°C)
MOLYKA G	Li soap	Especially for lubrication of high-rolling and plain bearings or other moving components operating under high load. For cases that require "emergency" properties of the lubricant, the product contains graphite and MoS <sub>2</sub> .	CCEB 2/3	KF2/3K-30	-30 to 120
K 3	Ca soap	For rolling and plain bearings operating under normal pressure and temperature especially in applications under wet conditions.	CAHA 2/3	K2/3C-30	-30 to 70
N 1	Ca soap	For rolling and plain bearings operating under low pressure and limited range of temperatures, also for applications that are centrally lubricated.	CAGA 1/2	K1/2C- 30	-30 to 50
G 3	Ca soap	A graphite containing grease for application in wet environment.	CAHB 3	KF3C - 30	-30 to 70
LC 2	Li kx soap	For rolling and plain bearings and other applications in demanding environments, especially for bearings operating under high load and temperature.	BEEB 2	KP2P-20	-20 to 150 (180)



Biologically Degradable Lubricating Greases					
MOGUL	Type of Thickener	Product Specification	Classification ISO 6743	Classification DIN 51 502	Temperature range of application (°C)
EKO V	Al soap	For lubrication of rail switches.	-	-	-10 to + 50
EKO-V-PS	Al soap	For lubrication of switches in rail transportation industry (product formula contains synthetic ester to enhance product resistance to weather).	-	-	-20 to + 80
EKO OK	Al soap	Wheel flange lubricant for railways.	-	-	-10 to + 50
EKO OK-PS	Al soap	Wheel flange lubricant for railways (product formula contains synthetic ester to enhance the resistance of the lubricant to weather conditions).	-	-	-20 to +80
EKO L2	Ca soap	Lubricating grease designed for lubrication of machines that operate in ecology reserves; the product replaces common oil-based greases.	BBEB 2	KP2E-20	-20 to + 80

Special Products			
MOGUL	Product Specification	Classification ISO 6743	Classification DIN 51 502
MOLYKA R	Solid lubricant in the form of powder MoS <sub>2</sub> is used for lubrication of moving parts where subsequent lubrication is difficult or impossible (joints, valves, etc.), for finishing of surfaces in demountable connections especially at high temperatures and in aggressive environments (preparation of a separation layer), also as a lubricant for drawing and pressing of metals.	-	-

Mogul	Product Specification	Congeeing point (°C)
Yellow Vaseline	Petroleum jelly for technological purposes	46 - 58
Corrosion Preventives Vaseline KORON L	Conservation grease for temporary protection of metal products against atmospheric corrosion during transportation and storage, especially for long-term protection in mild climates.	



**MOGUL**

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Published in 2009 by Paramo, a.s.

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