



**Petrol Ofisi**

# Lubricants Product Catalogue





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**POTEM**  
PETROL OFISI TECHNOLOGY CENTER



Petrol Ofisi Technology Center, POTEM, which has the first and most comprehensive TS EN ISO/IEC 1705:2005 laboratory qualification accreditation in the industry, is positioned as one of the most advanced laboratories in Turkey and the nearby geography in terms of lubricant and fuel oil product research and development activities with its state-of-the-art technological equipment and expert team.

Our laboratory with an indoor area of 1,200 m<sup>2</sup> and an investment value of 6 million dollars, located in the Petrol Ofisi Lubricants production facility, has been offering services with state-of-the-art equipment, expert staff, and unique knowledge and experience since 1941. With its advanced technology and accreditation capability, POTEM does not provide service only for Petrol Ofisi. It provides R&D, quality control and analysis services to public institutions, numerous national and international companies including the global top players, in short, to the whole industry.



# EV FLUIDS



## Ultra Gres EV

### Applications

ULTRA GRES EV is specially formulated grease for electric vehicles with high quality base oils, corrosion and oxidation inhibitor additives.

### Typical Specifications\*

Thickener Type		Polyurea
Base Oil Viscosity, 40°C, mm <sup>2</sup> /s	ASTM D7152	116
Base Oil Viscosity, 100°C, mm <sup>2</sup> /s	ASTM D7152	12.2
Base Oil Type		Mineral
NLGI		2
Colour		Dark Green
Density, 15°C, kg/l	IP 530	0.9
Dropping Point, °C	IP 396	240

\* Values shown may differ between productions.



## Maxigear EV Transmission Fluid

### Fully Synthetic Transmission Fluid For Electric Vehicles

### Applications

MAXIGEAR EV TRANSMISSION FLUID is a fully synthetic gear oil specially developed for electric vehicles with the high technology.

### Typical Specifications\*

Density, 15°C, kg/liter	ASTM D4052	0,850
Flash Point, COC, °C	ASTM D92	230
Viscosity, 40°C, mm <sup>2</sup> /s	ASTM D445	51,8
Viscosity, 100°C, mm <sup>2</sup> /s	ASTM D445	8,90
Viscosity Index	ASTM D2270	153
Pour Point, °C	ASTM D97	-39

\* Values shown may differ between productions.



## Maxima EV Fluid LC

### Coolant For Electric Vehicles

### Applications

It is suitable for battery electrical vehicles (BEVs).

### Typical Specifications\*

Density, g/ml, [20°C]	ASTM D4052	1,066
Electrical Conductivity, μS/cm, (25°C)	ASTM D1125	← 96
Electrical Conductivity, μS/cm, (80°C)	ASTM D1125	← 188
Freezing Point, °C	ASTM D1177	-37,6
Thermal Conductivity, W/mK	ASTM D7895	0,42
Kinematic Viscosity, mm <sup>2</sup> /s (20°C)	ASTM D445	3,7
Boiling Point, °C	ASTM D1120	110,9
pH, 20 °C	ASTM D1287	8,2
Pour Point, °C	ASTM D97	-45

\* Values shown may differ between productions.



# MOTOR OILS



## Maxima HYBRID 0W-16 Fully Synthetic Motor Oil

### Applications

Maxima HYBRID 0W-16 is a low-ash, fully synthetic motor oil designed in accordance with the current exhaust emission regulations for the state of art technology passenger car and light commercial vehicle engines.

### Performance

API SN/CF, ACEA C2, A5/B5, ILSAC GF-5

### Typical Specifications\*

SAE Viscosity Grade		0W-16
Density, 15 °C, kg/liter	ASTM D4052	0,850
Flash Point, COC, °C	ASTM D92	220
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	39,1
Viscosity, 100 °C, mm <sup>2</sup> /s		7,60
Viscosity Index	ASTM D2270	156
Pour Point, °C	ASTM D97	-48

\* Values shown may differ between productions.



## Maxima HYBRID 0W-20 Fully Synthetic Motor Oil

### Applications

Maxima HYBRID 0W-20 is the motor oil, which focuses on the fuel saving, which is produced for vehicles with new-generation hybrid technology and light commercial vehicles and passenger cars having gasoline or diesel motor, and which can rapidly respond to the instant lubrication need of the start-stop technology. It can be used for vehicle motors with particulate filter, which demands motor oil at ACEA C2 or C3 level.

### Performance

API SN/CF, ACEA C5, VOLVO VCC RBS0-2AE, FIAT 9.55535 DSX / DM1

### Typical Specifications\*

SAE Viscosity Grade		0W-20
Density, 15 °C, kg/liter	ASTM D4052	0,850
Flash Point, COC, °C	ASTM D92	236
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	47,19
Viscosity, 100 °C, mm <sup>2</sup> /s		9,08
Viscosity Index	ASTM D2270	178
Pour Point, °C	ASTM D97	-48

\* Values shown may differ between productions.



## Maxima VSA 0W-20 Fully Synthetic Engine Oil

### Applications

With its synthetic formula, Maxima VSA 0W-20 has been developed for all passenger and light duty vehicles with diesel particulate filters requiring ACEA C5 performance, and gasoline vehicles with catalytic converters.

### Performance

API SP, ACEA C5, VW 508.00/509.00, Porsche C20, FIAT 9.55535 DM1

### Typical Specifications\*

SAE Viscosity Grade		0W-20
Density, 15 °C, kg/liter	ASTM D4052	0,844
Flash Point, COC, °C	ASTM D92	228
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	41,6
Viscosity, 100 °C, mm <sup>2</sup> /s		8,70
Viscosity Index	ASTM D2270	180
Pour Point, °C	ASTM D97	-54

\* Values shown may differ between productions.



## Maxima 0W-20 Fully Synthetic Motor Oil

### Applications

Maxima 0W-20 is recommended for the vehicles requiring special lubricants, designed specifically for improved engine performance, increased fuel efficiency and decreased engine deposit.

### Performance

API SN/CF, ACEA A5/B5

### Typical Specifications\*

SAE Viscosity Grade		0W-20
Density, 15 °C, kg/liter	ASTM D4052	0,844
Flash Point, COC, °C	ASTM D92	228
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	45,5
Viscosity, 100 °C, mm <sup>2</sup> /s		8,80
Viscosity Index	ASTM D2270	177
Pour Point, °C	ASTM D97	-42

\* Values shown may differ between productions.



## Maxima K 0W-20 Fully Synthetic Motor Oil

### Applications

MAXIMA K 0W-20 has been developed to meet the latest standards for new generation hybrid technology vehicles and light commercial and passenger KIA vehicles with gas or diesel engines. Developed for vehicles requiring API SP and ACEA C5 performance level engine lubricating oil.

### Performance

API SP, ACEA C5

### Typical Specifications\*

SAE Viscosity Grade		0W-20
Density, 15 °C, kg/liter	ASTM D4052	0,844
Flash Point, COC, °C	ASTM D92	259
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	46,4
Viscosity, 100 °C, mm <sup>2</sup> /s		8,7
Viscosity Index	ASTM D2270	169
Pour Point, °C	ASTM D97	-39

\* Values shown may differ between productions.



## Maxima CX 0W-20<sup>plus</sup> Long Lasting Synthetic Motor Oil

### Applications

Developed to meet the latest standards as required by next generation passenger car engines. Specifically formulated to meet additional requirements as required by small engines with Turbocharged Gasoline Direct Injection (TGDI) technology. Developed for vehicles which require engine lubricating oil to meet performance level of API SP, ACEA C5, and FIAT 9.55535-DM1.

### Performance

API SP, ACEA C5, FIAT 9.55535-DM1

### Typical Specifications\*

SAE Viscosity Grade		0W-20
Density, 15 °C, kg/liter	ASTM D4052	0,845
Flash Point, COC, °C	ASTM D92	262
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	46,4
Viscosity, 100 °C, mm <sup>2</sup> /s		8,67
Viscosity Index	ASTM D2270	169
Pour Point, °C	ASTM D97	-42

\* Values shown may differ between productions.



## Maxima 0W-30 Long Life Fully Synthetic Motor Oil

### Applications

Suitable for high performance gasoline and diesel engines of light commercial and passenger cars, especially those require WSS-M2C950-A performance level.

### Performance

API SN, ACEA A5/B5, ACEA C2, FORD WSS-M2C950-A, Fiat 955535-GS1 / 955535-DS1

### Typical Specifications\*

SAE Viscosity Grade		0W-30
Density, 15 °C, kg/liter	ASTM D4052	0,842
Flash Point, COC, °C	ASTM D92	224
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	51,4
Viscosity, 100 °C, mm <sup>2</sup> /s		9,70
Viscosity Index	ASTM D2270	190
Pour Point, °C	ASTM D97	-39

\* Values shown may differ between productions.



## Maxima 5W-20 Advanced Technology Fully Synthetic Motor Oil

### Applications

Maxima 5W-20 is designed to fulfill the latest standards of modern vehicle motors.

### Performance

API SP/CF, ACEA C2

### Typical Specifications\*

SAE Viscosity Grade		5W-20
Density, 15 °C, kg/liter	ASTM D4052	0,850
Flash Point, COC, °C	ASTM D92	240
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	51,4
Viscosity, 100 °C, mm <sup>2</sup> /s		8,90
Viscosity Index	ASTM D2270	153
Pour Point, °C	ASTM D97	-33

\* Values shown may differ between productions.



## Maxima CX 0W-30<sup>plus</sup> Long-Lasting Synthetic Motor Oil

### Applications

Developed for vehicles that require a motor oil at the performance level of ACEA C2 and FIAT 9.55535-DS1/9.55535-GS1 in next-generation diesel and gasoline engines. It can also be used in vehicles requiring motor oil at the performance level of ACEA C3.

### Performance

ACEA C2, FIAT 9.55535-DS1/GS1

### Typical Specifications\*

SAE Viscosity Grade		0W-30
Density, 15 °C, kg/liter	ASTM D4052	0,843
Flash Point, COC, °C	ASTM D92	238
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	55,6
Viscosity, 100 °C, mm <sup>2</sup> /s		11,60
Viscosity Index	ASTM D2270	178
Pour Point, °C	ASTM D97	-39

\* Values shown may differ between productions.



## Maxima M 5W-30 Fully Synthetic Engine Oil for Vehicles with Particulate Filter

### Applications

Maxima M 5W-30 may be used in diesel passenger cars and light commercial vehicles requiring engine oil at the ACEA C2 or C3 performance level and equipped with exhaust emission systems containing DPF and SCR, and gasoline vehicles with catalytic converters. It is recommended not to use any additives along with this oil. Specially developed for Mitsubishi brand vehicles.

### Performance

API SP/CF, ACEA C2/C3

### Typical Specifications\*

SAE Viscosity Grade		5W-30
Density, 15 °C, kg/liter	ASTM D4052	0,850
Flash Point, COC, °C	ASTM D92	230
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	69,4
Viscosity, 100 °C, mm <sup>2</sup> /s		11,60
Viscosity Index	ASTM D2270	163
Pour Point, °C	ASTM D97	-33

\* Values shown may differ between productions.





## Maxima K 5W-30 Full-Synthetic Gasoline Motor Oil

### Applications

Maxima K 5W-30 for diesel passenger and light commercial vehicle motors equipped with DPF and SCR exhaust emission systems demanding motor oil with an ACEA C2 or C3 performance level and gasoline vehicle motors with catalytic converters. This is specially developed for KIA branded vehicles.

### Performance

API SP/CF, ACEA C2/C3

### Typical Specifications\*

SAE Viscosity Grade		5W30
Density, 15 °C, kg/liter	ASTM D4052	0,860
Flash Point, COC, °C	ASTM D92	220
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	74,7
Viscosity, 100 °C, mm <sup>2</sup> /s		11,80
Viscosity Index	ASTM D2270	165
Pour Point, °C	ASTM D97	-33

\* Values shown may differ between productions.



## Maxima VSA 5W-30 Fully Synthetic Motor Oil

### Applications

Recommended for new generation both for gasoline and diesel engines. used in engines demanding VW 504 00/507 00 approval. Recommended for all driving conditions.

### Performance

API SN, ACEA C3, VW 504.00/507.00, PORSCHE C30

### Typical Specifications\*

SAE Viscosity Grade		5W-30
Density, 15 °C, kg/liter	ASTM D4052	0,850
Flash Point, COC, °C	ASTM D92	230
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	66,7
Viscosity, 100 °C, mm <sup>2</sup> /s		11,30
Viscosity Index	ASTM D2270	171
Pour Point, °C	ASTM D97	-42

\* Values shown may differ between productions.



## Maxima PRO 5W-30 Fully Synthetic Motor Oil

### Applications

Maxima PRO 5W-30 can be used in diesel passenger cars and light commercial vehicles equipped with exhaust emission systems containing DPF and SCR and requiring engine oil at the ACEA C2 or ACEA C3 performance level, and in gasoline vehicle engines with catalytic converters. It is recommended not to use any additives along with this oil.

### Performance

API SP/CF, ACEA C2/C3, FIAT 9.55535-S1

### Typical Specifications\*

SAE Viscosity Grade		5W-30
Density, 15 °C, kg/liter	ASTM D4052	0,850
Flash Point, COC, °C	ASTM D92	242
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	67,1
Viscosity, 100 °C, mm <sup>2</sup> /s		11,30
Viscosity Index	ASTM D2270	166
Pour Point, °C	ASTM D97	-33

\* Values shown may differ between productions.



## Maxima PG 5W-30 Fully Synthetic, Premium Quality Motor Oil

### Applications

Excellently suited for use in PSA Group vehicles equipped with diesel particulate filter systems requiring ACEA C2 performance level. Also recommended for most recent FIAT Group, HONDA and TOYOTA gasoline and diesel engines with/without particulate filter.

### Performance

API SN/CF, ACEA A5/B5, ACEA C2, Fiat 9.55535 - S1, PSA B71 2290

### Typical Specifications\*

SAE Viscosity Grade		5W-30
Density, 15 °C, kg/liter	ASTM D4052	0,850
Flash Point, COC, °C	ASTM D92	240
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	58,6
Viscosity, 100 °C, mm <sup>2</sup> /s		10,20
Viscosity Index	ASTM D2270	163
Pour Point, °C	ASTM D97	-42

\* Values shown may differ between productions.





## Maxima RN 5W-30 Fully Synthetic Motor Oil

### Applications

It is recommended for Euro IV diesel engines. Especially suitable for Renault vehicles with Diesel Particulate Filter.

### Performance

ACEA C4, MB-APPROVAL 229.51, RENAULT RN 0720

### Typical Specifications\*

SAE Viscosity Grade		5W-30
Density, 15 °C, kg/liter	ASTM D4052	0,848
Flash Point, COC, °C	ASTM D92	234
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	71
Viscosity, 100 °C, mm <sup>2</sup> /s		11,20
Viscosity Index	ASTM D2270	169
Pour Point, °C	ASTM D97	-37

\* Values shown may differ between productions.



## Maxima CX 5W-30<sup>plus</sup> Fully Synthetic Motor Oil for the Vehicles with Diesel Particulate Filter

### Applications

Maxima CX 5W-30 can be used in the gasoline vehicles with catalytic convertor and diesel passenger and light commercial vehicles equipped with the exhaust systems containing DPF and SCR, requiring engine oil at the ACEA C2 or C3 performance level.

### Performance

API SP/CF, ACEA C2, C3, MB-Approval 229.31, Fiat 9.55535-S1

### Typical Specifications\*

SAE Viscosity Grade		5W-30
Density, 15 °C, kg/liter	ASTM D4052	0,849
Flash Point, COC, °C	ASTM D92	220
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	67,1
Viscosity, 100 °C, mm <sup>2</sup> /s		11,60
Viscosity Index	ASTM D2270	165
Pour Point, °C	ASTM D97	-33

\* Values shown may differ between productions.



## Maxima Diesel LA 5W-30 Fully Synthetic Motor Oil for Vehicles with Diesel Particulate Filter

### Applications

Can be used in high performance passenger cars which have gasoline and diesel engines with particulate filter.

### Performance

API SN/CF, ACEA C3, MB - APPROVAL 229.51, BMW LL-04, GM DEXOS2, RENAULT 0700/0710

### Typical Specifications\*

SAE Viscosity Grade		5W-30
Density, 15 °C, kg/liter	ASTM D4052	0,848
Flash Point, COC, °C	ASTM D92	228
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	60,4
Viscosity, 100 °C, mm <sup>2</sup> /s		11,20
Viscosity Index	ASTM D2270	181
Pour Point, °C	ASTM D97	-39

\* Values shown may differ between productions.



## Maxima FM 5W-30 Fully Synthetic Motor Oil

### Applications

It is formulated for both gasoline and diesel engines. Developed for Ford.

### Performance

API SN/CF, ACEA A5/B5, Ford WSS-M2C913-D (A, B, C)

### Typical Specifications\*

SAE Viscosity Grade		5W-30
Density, 15 °C, kg/liter	ASTM D4052	0,848
Flash Point, COC, °C	ASTM D92	238
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	55,7
Viscosity, 100 °C, mm <sup>2</sup> /s		10
Viscosity Index	ASTM D2270	166
Pour Point, °C	ASTM D97	-36

\* Values shown may differ between productions.



## Maxima XT 5W-30 Synthetic Motor Oil

### Applications

It is developed for both high technology gasoline and diesel engines.

### Performance

API SL/CF, ACEA A3/B4

### Typical Specifications\*

SAE Viscosity Grade		5W-30
Density, 15 °C, kg/liter	ASTM D4052	0,850
Flash Point, COC, °C	ASTM D92	230
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	55,6
Viscosity, 100 °C, mm <sup>2</sup> /s		11,30
Viscosity Index	ASTM D2270	162
Pour Point, °C	ASTM D97	-36

\* Values shown may differ between productions.



## Maxima K 5W-40 Full-Synthetic Gasoline Motor Oil

### Applications

Maxima K 5W-40 may be used for diesel passenger and light commercial vehicle motors equipped with DPF and SCR exhaust emission systems demanding motor oil with an ACEA C3 performance level and gasoline vehicle motors with catalytic converters. This is not recommended not to use any additive with this oil. This is specially developed for KIA branded vehicles.

### Performance

API SP/CF, ACEA C3

### Typical Specifications\*

SAE Viscosity Grade		5W-40
Density, 15 °C, kg/liter	ASTM D4052	0,850
Flash Point, COC, °C	ASTM D92	240
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	81,5
Viscosity, 100 °C, mm <sup>2</sup> /s		13,60
Viscosity Index	ASTM D2270	171
Pour Point, °C	ASTM D97	-36

\* Values shown may differ between productions.



## Maxima AUTO LPG 5W-30 Synthetic Motor Oil for Next-Generation LPG Fueled Engines

### Applications

It can be used in LPG-reformed passenger cars and light commercial vehicles with next-generation engines and in vehicles with factory-installed LPG fuel systems.

### Performance

API SL/CF, ACEA A3/B4

### Typical Specifications\*

SAE Viscosity Grade		5W-30
Density, 15 °C, kg/liter	ASTM D4052	0,835
Flash Point, COC, °C	ASTM D92	230
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	67,2
Viscosity, 100 °C, mm <sup>2</sup> /s		11,90
Viscosity Index	ASTM D2270	154
Pour Point, °C	ASTM D97	-41

\* Values shown may differ between productions.



## Maxima PRO 5W-40 Fully Synthetic Motor Oil

### Applications

Maxima PRO 5W-40 can be used in diesel passenger cars and light commercial vehicles equipped with exhaust emission systems containing DPF and SCR and requiring engine oil at the ACEA C3 performance level, and in gasoline vehicle engines with catalytic converters. It is recommended not to use any additives along with this oil.

### Performance

API SP/CF, ACEA C3, FIAT 9.55535-S2

### Typical Specifications\*

SAE Viscosity Grade		5W-40
Density, 15 °C, kg/liter	ASTM D4052	0,849
Flash Point, COC, °C	ASTM D92	242
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	82,5
Viscosity, 100 °C, mm <sup>2</sup> /s		13,70
Viscosity Index	ASTM D2270	170
Pour Point, °C	ASTM D97	-39

\* Values shown may differ between productions.





## Maxima 5W-40 Fully Synthetic Motor Oil

### Applications

Suitable for all diesel engines in the passenger cars and light commercial vehicles demanding SAE 5W-40 viscosity grade and ACEA A3/B4 engine oil performance level.

### Performance

API SN/CF, ACEA A3/B4, MB-APPROVAL 229.5, MB-APPROVAL 226.5, FIAT 9.55535-N2, RN 0700/RN 0710, VW 502.00/505.00

### Typical Specifications\*

SAE Viscosity Grade		5W-40
Density, 15 °C, kg/liter	ASTM D4052	0,854
Flash Point, COC, °C	ASTM D92	232
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	77
Viscosity, 100 °C, mm <sup>2</sup> /s		12,80
Viscosity Index	ASTM D2270	169
Pour Point, °C	ASTM D97	-36

\* Values shown may differ between productions.



## Maxima Diesel 5W-40 Fully Synthetic Motor Oil

### Applications

Suitable for all diesel engines in the passenger cars and light commercial vehicles demanding SAE 5W-40 viscosity grade and ACEA A3/B4 engine oil performance level.

### Performance

API SN/CF, ACEA A3/B4, FIAT 9.55535-M2/N2/Z2, MB 229.3, Renault RN 700/710, VW 502.00/505.00

### Typical Specifications\*

SAE Viscosity Grade		5W-40
Density, 15 °C, kg/liter	ASTM D4052	0,860
Flash Point, COC, °C	ASTM D92	240
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	77
Viscosity, 100 °C, mm <sup>2</sup> /s		12,80
Viscosity Index	ASTM D2270	169
Pour Point, °C	ASTM D97	-39

\* Values shown may differ between productions.



# You Get to Know Your Motor Oil on the Road

Maxima has been on all the roads in Turkey year after year.  
With Maxima, power, reliability, and performance are always near.





## Maxima 10W-30 Synthetic Motor Oil

### Applications

Suitable for high performance gasoline and diesel engine passenger cars, SUV, pick-ups and off-road vehicles such as CHRYSLER, GMC, FORD, DODGE, TOYOTA, NISSAN, etc.

### Performance

API SL/CF, ACEA A3/B4, VW 501.01/505.00

### Typical Specifications\*

SAE Viscosity Grade		10W-30
Density, 15 °C, kg/liter	ASTM D4052	0,874
Flash Point, COC, °C	ASTM D92	220
Viscosity, 40 °C, mm <sup>2</sup> /s		73
Viscosity, 100 °C, mm <sup>2</sup> /s	ASTM D445	11,30
Viscosity Index	ASTM D2270	141
Pour Point, °C	ASTM D97	-39

\* Values shown may differ between productions.



## Maxima AUTO LPG 10W-40 Liquefied Petroleum Gas (LPG) Motor Oil

### Applications

Recommended for use in all high performance modern passenger cars, operated with LPG.

### Performance

API SL/CF, ACEA A3/B4, MB 229.3, VW 501.01/505.00

### Typical Specifications\*

SAE Viscosity Grade		10W-40
Density, 15 °C, kg/liter	ASTM D4052	0,870
Flash Point, COC, °C	ASTM D92	226
Viscosity, 40 °C, mm <sup>2</sup> /s		91,2
Viscosity, 100 °C, mm <sup>2</sup> /s	ASTM D445	13,80
Viscosity Index	ASTM D2270	154
Pour Point, °C	ASTM D97	-33

\* Values shown may differ between productions.



## MAXIMA 10W-40<sup>plus</sup> Geliştirilmiş Yeni Formüllü, Sentetik Motor Yağı

### Applications

Suitable for all gasoline and diesel engines in the passenger cars and light commercial vehicles demanding SAE 10W-40 viscosity grade and ACEA A3/B4 engine oil performance level.

### Performance

API SL/CF, ACEA A3/B4, MB 229.1, VW 501.01/505.00

### Typical Specifications\*

SAE Viscosity Grade		10W-40
Density, 15 °C, kg/liter	ASTM D4052	0,870
Flash Point, COC, °C	ASTM D92	234
Viscosity, 40 °C, mm <sup>2</sup> /s		86,5
Viscosity, 100 °C, mm <sup>2</sup> /s	ASTM D445	130
Viscosity Index	ASTM D2270	151
Pour Point, °C	ASTM D97	-33

\* Values shown may differ between productions.



## Maxima 15W-40 Gasoline Motor Oil

### Applications

Can be used in gasoline engine passenger cars and light commercial vehicles including turbocharged engines.

### Performance

API SH/CD

### Typical Specifications\*

SAE Viscosity Grade		15W-40
Density, 15 °C, kg/liter	ASTM D4052	0,884
Flash Point, COC, °C	ASTM D92	230
Viscosity, 40 °C, mm <sup>2</sup> /s		106
Viscosity, 100 °C, mm <sup>2</sup> /s	ASTM D445	14,50
Viscosity Index	ASTM D2270	140
Pour Point, °C	ASTM D97	-30

\* Values shown may differ between productions.



## Maxima 20W-50 Multigrade Engine Oil

### Applications

Suitable for passenger cars and light commercial vehicles including turbocharged engines. Compatible for severe travelling conditions, such as heavy traffic and highway.

### Performance

API SH/CD

### Typical Specifications\*

SAE Viscosity Grade		20W-50
Density, 15 °C, kg/liter	ASTM D4052	0,890
Flash Point, COC, °C	ASTM D92	228
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	179,8
Viscosity, 100 °C, mm <sup>2</sup> /s		20
Viscosity Index	ASTM D2270	129
Pour Point, °C	ASTM D97	-24

\* Values shown may differ between productions.



## Maximoto 10W-40 SCOOTER Four-Stroke, Synthetic Motorcycle Oil

### Applications

Developed for next generation Scooter-type motorcycles using four-stroke automatic transmission. In addition, it is also suitable for use in motorcycles manufactured in Europe and Japan, for which compliance with API SN and JASO MB specifications are recommended.

### Performance

API SN, JASO MB

### Typical Specifications\*

SAE Viscosity Grade		10W-40
Density, 15 °C, kg/liter	ASTM D4052	0,870
Flash Point, COC, °C	ASTM D92	236
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	93,3
Viscosity, 100 °C, mm <sup>2</sup> /s		13,50
Viscosity Index	ASTM D2270	145
Pour Point, °C	ASTM D97	-39

\* Değerler üretimden üretime farklılıklar gösterebilir.



## Maxima AUTO LPG 20W-50 Liquefied Petroleum Gas (LPG) Motor Oil

### Applications

Suitable for all LPG operated engines in the passenger cars demanding SAE 20W-50 viscosity grade motor oil.

### Performance

API SH/CD

### Typical Specifications\*

SAE Viscosity Grade		20W-50
Density, 15 °C, kg/liter	ASTM D4052	0,890
Flash Point, COC, °C	ASTM D92	254
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	180,3
Viscosity, 100 °C, mm <sup>2</sup> /s		20,10
Viscosity Index	ASTM D2270	129
Pour Point, °C	ASTM D97	-24

\* Values shown may differ between productions.



## Maximoto 10W-40 4 Stroke Synthetic Motorcycle Engine Oil

### Applications

It is used in 4 stroke and high performance, either liquid or air cooled motorcycles all around year. In addition, it is suitable for European and Japanese motorcycle manufacturers which recommend API SL and/or JASO MA2 specifications.

### Performance

API SN, JASO MA2

### Typical Specifications\*

SAE Viscosity Grade		10W-40
Density, 15 °C, kg/liter	ASTM D4052	0,870
Flash Point, COC, °C	ASTM D92	240
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	91,9
Viscosity, 100 °C, mm <sup>2</sup> /s		13,70
Viscosity Index	ASTM D2270	151
Pour Point, °C	ASTM D97	-33

\* Values shown may differ between productions.



## Maximoto 15W-50 Four-Stroke Motorcycle Oil

### Applications

Used for four-stroke and high performance motorcycles.

### Performance

API SN, JASO MA2

### Typical Specifications\*

SAE Viskozite Sınıfı		15W-50
Yoğunluk, 15 °C, kg/litre	ASTM D4052	0,880
Parlama Noktası, COC, °C	ASTM D92	234
Viskozite, 40 °C, mm <sup>2</sup> /s	ASTM D445	145,4
Viskozite, 100 °C, mm <sup>2</sup> /s		18,56
Viskozite İndeksi	ASTM D2270	144
Akma Noktası, °C	ASTM D97	-30

\* Values shown may differ between productions.



## Maximoto 2T 2-Cycle, Air Cooled High Quality Engine Oil

### Applications

It can be used in all types of 2-stroke motorcycle and scooter air-cooled engines. In general, oil to fuel ratio ranges between 1/16 to 1/50. It is recommended to refer Original Equipment Manufacturer booklet for suitable ratio ranges.

### Performance

API TC, (CEC TSC-3)

### Typical Specifications\*

SAE Viskozite Sınıfı		2T
Density, 15 °C, kg/liter	ASTM D4052	0,890
Flash Point, COC, °C	ASTM D92	250
Viskozite, 40 °C, mm <sup>2</sup> /s	ASTM D445	119
Viskozite, 100 °C, mm <sup>2</sup> /s		12,80
Viskozite İndeksi	ASTM D2270	100
Pour Point, °C	ASTM D97	-12

\* Values shown may differ between productions.



## Diesel Motor Oils for Heavy Commercial Vehicles

## Maximoto 20W-50 Four-Stroke Motorcycle Oil

### Applications

Used for four-stroke and high performance motorcycles.

### Performance

API SG/CF

### Typical Specifications\*

SAE Viskozite Sınıfı		20W-50
Density, 15 °C, kg/liter	ASTM D4052	0,890
Flash Point, COC, °C	ASTM D92	220
Viskozite, 40 °C, mm <sup>2</sup> /s	ASTM D445	172
Viskozite, 100 °C, mm <sup>2</sup> /s		19,50
Viskozite İndeksi	ASTM D2270	130
Pour Point, °C	ASTM D97	-24

\* Values shown may differ between productions.



## Maximus HD-E 5W-30 Fully Synthetic Heavy Duty Diesel Engine Oil

### Applications

It is recommended for all heavy duty vehicles, construction equipment and highway fleet equipped with high power, 4-cycle diesel engines. It is convenient for engines with and without DPF and engines with EGR and SCR. It is especially recommended for modern Volvo Heavy Duty engines.

### Performance

API CJ-4/CK-4/SN, ACEA E4/E6/E7/E8/E9/E11, MB-Approval 228.51, MAN 3677/3477/3271-1, VOLVO VDS-4.5, Mack E0S-4.5, RENAULT VI RLD-3, MTU OIL CATEGORY 3.1, JASO DH-2, MB 228.52, MB 228.31, MACK EO-0 PREMIUM PLUS, CUMMINS CES 20081/20086, MACK E0S 4.5, DEUTZ DQC IV-18 LA, DETROIT DIESEL 93K222/218, CATERPILLAR ECF-3, SCANIA LOW ASH/LDF-4

### Typical Specifications\*

SAE Viskozite Sınıfı		5W-30
Density, 15 °C, kg/liter	ASTM D4052	0,870
Flash Point, COC, °C	ASTM D92	220
Viskozite, 40 °C, mm <sup>2</sup> /s	ASTM D445	69,7
Viskozite, 100 °C, mm <sup>2</sup> /s		11,40
Viskozite İndeksi	ASTM D2270	157
Pour Point, °C	ASTM D97	-45

\* Values shown may differ between productions.





## Maximus HD-M 5W-30 Fully Synthetic Heavy Duty Diesel Engine Oil

### Applications

It is recommended for all heavy duty vehicles, construction equipment and highway fleet equipped with high power, 4-cycle diesel engines produced after 2017 that requires API FA-4 performance level. It is convenient for engines with and without DPF and engines with EGR and SCR. It is recommended to check OEM requirements for older generation vehicles.

### Performance

API FA-4, MB-Approval 228.61, CUMMINS CES 20087, Detroit Diesel 93K223

### Typical Specifications\*

SAE Viscosity Grade		5W-30
Density, 15 °C, kg/liter	ASTM D4052	0,855
Flash Point, COC, °C	ASTM D92	228
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	57,2
Viscosity, 100 °C, mm <sup>2</sup> /s		9,97
Viscosity Index	ASTM D2270	162
Pour Point, °C	ASTM D97	-45

\* Values shown may differ between productions.



## Maximus HD 10W-30 Fully Synthetic Heavy Duty Diesel Engine Oil

### Applications

It is recommended for all heavy duty vehicles, construction equipment and highway fleet equipped with high power, 4-cycle diesel engines. It is convenient for engines with and without DPF and engines with EGR and SCR. It is especially recommended for modern Volvo Heavy Duty engines.

### Performance

API CK-4/SN, ACEA E7/E9/E11, VOLVO VDS-4.5, Mack EOS 4.5, Renault VI RLD-3, MAN 3775, MB 228.31, Cummins 20086, Caterpillar ECF-3, Deutz QDC III-18LA, Detroit Diesel DFS93K222, JASO DH-2, Ford WSS-M2C171-F1

### Typical Specifications\*

SAE Viscosity Grade		10W-30
Density, 15 °C, kg/liter	ASTM D4052	0,866
Flash Point, COC, °C	ASTM D92	230
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	75
Viscosity, 100 °C, mm <sup>2</sup> /s		11,90
Viscosity Index	ASTM D2270	153
Pour Point, °C	ASTM D97	-39

\* Values shown may differ between productions.



## Maximus LA 5W-30 Fully Synthetic Heavy Duty Diesel Engine Oil

### Applications

It is recommended in EURO V or EURO VI heavy duty diesel vehicles. Used in heavy duty vehicles, construction equipment and long-haul fleets in industries such as transportation, construction, mining and agriculture. Suitable for vehicles with and without DPF, and engines with EGR and SCR.

### Performance

API CJ-4/SN, ACEA E6/E7/E8/E9/E11, MB 228.51, MAN M3677

### Typical Specifications\*

SAE Viscosity Grade		5W-30
Density, 15 °C, kg/liter	ASTM D4052	0,850
Flash Point, COC, °C	ASTM D92	230
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	57,5
Viscosity, 100 °C, mm <sup>2</sup> /s		10,50
Viscosity Index	ASTM D2270	175
Pour Point, °C	ASTM D97	-47

\* Values shown may differ between productions.



## Maximus 10W-30 Synthetic Diesel Engine Oil

### Applications

Recommended for all applications involving light commercial vehicles, trucks, buses, construction machines, and generators equipped with a diesel engine, especially with turbocharged and low emission diesel engines.

### Performance

API CI-4, ACEA E7, MAN M3275, MB 228.3, Volvo VDS-3, Renault RLD-2, Cummins 20077/20078, Mack EO-N, Global DHD1, CAT ECF-1a/ECF-2, JASO DH-1, Detroit Diesel DDC 93K215, Ford WSS-M2C921-A

### Typical Specifications\*

SAE Viscosity Grade		10W-30
Density, 15 °C, kg/liter	ASTM D4052	0,873
Flash Point, COC, °C	ASTM D92	230
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	80
Viscosity, 100 °C, mm <sup>2</sup> /s		11,80
Viscosity Index	ASTM D2270	141
Pour Point, °C	ASTM D97	-33

\* Values shown may differ between productions.



## Maximus HD-E 10W-40

### Fully Synthetic Heavy Duty Diesel Engine Oil

#### Applications

Used in all high-speed and four-stroke diesel heavy vehicles. Recommended for use in heavy vehicles, construction equipment and long-haul fleets in industries such as transportation, construction, mining and agriculture. Suitable for vehicles with and without DPF, and engines with EGR and SCR. Particularly recommended for modern Volvo heavy-duty vehicle.

#### Performance

API CJ-4, ACEA E6/E7/E8/E9/E11, MB-Approval 228.51, Mack EO-O Premium Plus, Volvo VDS-4, Renault VI RLD-3, CAT ECF-3/ECF-2, Cummins CES 20081, Deutz DQC IV-10 LA, Detroit Diesel DDC 93K218, MAN M3271-1/M3477, MB 228.31, MTU Type 3.1, Scania Low Ash

#### Typical Specifications\*

SAE Viscosity Grade		10W-40
Density, 15 °C, kg/liter	ASTM D4052	0,860
Flash Point, COC, °C	ASTM D92	222
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	90
Viscosity, 100 °C, mm <sup>2</sup> /s		13,70
Viscosity Index	ASTM D2270	150
Pour Point, °C	ASTM D 97	-36

\* Values shown may differ between productions.



## Maximus HD 10W-40

### Fully Synthetic Heavy Duty Diesel Engine Oil

#### Applications

It is recommended for all heavy duty vehicles, construction equipment and highway fleet equipped with high power, 4-cycle diesel engines. It is convenient for engines with and without DPF and engines with EGR and SCR. It is especially recommended for modern Volvo Heavy Duty engines.

#### Performance

API CK-4/SN, ACEA E7/E9/E11, MB-Approval 228.31, VOLVO VDS-4.5, RENAULT TRUCKS RLD-3, MAN M3775, CUMMINS 20086, MTU Type 2.1, MACK EOS 4.5, JASO DH-2, CATERPILLAR ECF-3/ ECF-2/ECF-1-a, DEUTZ DQC III-18LA, DETROIT DIESEL DDC93K222

#### Typical Specifications\*

SAE Viscosity Grade		10W-40
Density, 15 °C, kg/liter	ASTM D4052	0,858
Flash Point, COC, °C	ASTM D92	220
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	91,5
Viscosity, 100 °C, mm <sup>2</sup> /s		13,90
Viscosity Index	ASTM D2270	153
Pour Point, °C	ASTM D97	-42

\* Values shown may differ between productions.



## Maximus LA 10W-40

### Fully Synthetic Heavy Duty Diesel Engine Oil

#### Applications

Recommended for all vehicles with EGR and SCR systems that meets EURO I, II, III, IV, V and VI emission requirements and operates under severe conditions.

#### Performance

API CI-4, ACEA E6/E8/E7/E9/E11, MB-Approval 228.51, MAN 3477/M3271-1, SCANIA Low Ash, DEUTZ DQC IV 18 LA, MTU Type 3.1, Volvo VDS-3, Renault RLD-2, MACK EO-N, CAT ECF-1-a, Cummins CES 20076/77

#### Typical Specifications\*

SAE Viscosity Grade		10W-40
Density, 15 °C, kg/liter	ASTM D4052	0,860
Flash Point, COC, °C	ASTM D92	240
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	97,6
Viscosity, 100 °C, mm <sup>2</sup> /s		14,70
Viscosity Index	ASTM D2270	156
Pour Point, °C	ASTM D97	-33

\* Values shown may differ between productions.



## Maximus 10W-40

### Synthetic Heavy Duty Diesel Engine Oil

#### Applications

It is recommended for all 4-cycle light commercial or heavy-duty diesel engines with or without turbocharger those are working in construction, mining, transportation, agriculture and fleet.

#### Performance

API CI-4, ACEA E4/E7, MAN 3277, MB-Approval 228.5, VOLVO VDS-3, MACK EO-N, RENAULT VI RLD-2, CUMMINS 20076/77/78, DETROIT DIESEL DDC93K215, DEUTZ DQC III-18, JASO DH-1, Global DHD-1

#### Typical Specifications\*

SAE Viscosity Grade		10W-40
Density, 15 °C, kg/liter	ASTM D4052	0,869
Flash Point, COC, °C	ASTM D92	230
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	93
Viscosity, 100 °C, mm <sup>2</sup> /s		13,50
Viscosity Index	ASTM D2270	146
Pour Point, °C	ASTM D97	-36

\* Values shown may differ between productions.



## Maximus XT 10W-40 Synthetic Heavy Duty Diesel Engine Oil

### Applications

Recommended for all trucks, buses, construction machines, agricultural machines and generators with diesel engine, especially with turbocharged and low emission engines. It is recommended to use MAXIMUS LA 10W/40 for heavy duty diesel engines with DPF and SCR systems.

### Performance

API CI-4, ACEA E7-16, Cummins CES 20078, Detroit Diesel DDC 93K215, Deutz DQC III-10, Mack EO-N, MAN M3275-1, MB 228.3, MTU TYPE 2, Renault Trucks RLD, Volvo VDS-3

### Typical Specifications\*

SAE Viscosity Grade		10W-40
Density, 15 °C, kg/liter	ASTM D4052	0,871
Flash Point, COC, °C	ASTM D92	220
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	100
Viscosity, 100 °C, mm <sup>2</sup> /s		14,70
Viscosity Index	ASTM D2270	153
Pour Point, °C	ASTM D97	-36

\* Values shown may differ between productions.



## Maximus Turbo Diesel Extra 15W-40 Heavy Duty Diesel Engine Oil

### Applications

It is recommended for all heavy-duty vehicles, buses, trucks, construction equipment, and generators having diesel engines, especially turbocharged and low-emission diesel engines.

### Performance

API CI-4/SL/SC, ACEA E7, MB-Approval 228.3, Volvo VDS-3, Mack EO-N, Renault VI RLD-2, Deutz DQC III-18, MTU TYPE 2.0, JASO DH-1, Global DHD-1, Cummins CES 20077/78, Detroit Diesel DDC 93K215, MAN M3275, CAT ECF-1A

### Typical Specifications\*

SAE Viscosity Grade		15W-40
Density, 15 °C, kg/liter	ASTM D4052	0,886
Flash Point, COC, °C	ASTM D92	240
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	114
Viscosity, 100 °C, mm <sup>2</sup> /s		15
Viscosity Index	ASTM D2270	139
Pour Point, °C	ASTM D97	-30

\* Values shown may differ between productions.



## Maximus HD 15W-40 Ultra High Performance Diesel Engine Oil

### Applications

It is recommended for all heavy duty vehicles, construction equipment and highway fleet equipped with high power, 4-cycle diesel engines. It is convenient for engines with and without DPF and engines with EGR and SCR. It is especially recommended for modern Volvo Heavy Duty engines.

### Performance

API CK-4/SN, ACEA E9-16, JASO DH-2, CAT ECF-3/ECF-2/ECF-1-a, Cummins 20086, Detroit Diesel DFS93K222, Deutz DQC III-10LA, Ford WSS-M2C171-F1, Mack EO-S-4.5, MAN M3775, MB-Approval 228.31, MTU Type 2.1, Renault Trucks RLD-4/3, Volvo VDS-4.5

### Typical Specifications\*

SAE Viscosity Grade		15W-40
Density, 15 °C, kg/liter	ASTM D4052	0,876
Flash Point, COC, °C	ASTM D92	220
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	113,4
Viscosity, 100 °C, mm <sup>2</sup> /s		14,70
Viscosity Index	ASTM D2270	133
Pour Point, °C	ASTM D97	-33

\* Values shown may differ between productions.



## Maximus Turbo Diesel S 15W-40 Heavy Duty Diesel Engine Oil

### Applications

Recommended for trucks, buses, construction machines, agricultural machines and generators with diesel engine, especially with turbocharged engine.

### Performance

API CG-4/CF-4/CF/SH/SG, ACEA E2, MB 228.1

### Typical Specifications\*

SAE Viscosity Grade		15W-40
Density, 15 °C, kg/liter	ASTM D4052	0,884
Flash Point, COC, °C	ASTM D92	240
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	111
Viscosity, 100 °C, mm <sup>2</sup> /s		15,30
Viscosity Index	ASTM D2270	145
Pour Point, °C	ASTM D97	-30

\* Values shown may differ between productions.





## Maximus Super Diesel 20W-50 Heavy Duty Diesel Engine Oil

### Applications

Recommended for commercial vehicles, trucks, buses, construction machines, and generators having diesel engine including turbocharged and supercharged diesel engines.

### Performance

API CF-4/CF/CE/CD/SG, Allison C3, CAT TO-2, MIL-L-2104D, VW 505.00

### Typical Specifications\*

SAE Viscosity Grade		20W-50
Density, 15 °C, kg/liter	ASTM D4052	0,892
Flash Point, COC, °C	ASTM D92	240
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	176
Viscosity, 100 °C, mm <sup>2</sup> /s		19,70
Viscosity Index	ASTM D2270	128
Pour Point, °C	ASTM D97	-24

\* Values shown may differ between productions.



## Turboşarj Extra 40 Monograde High Performance Diesel Engine Oil

### Applications

High-speed, turbocharged diesel engines of heavy duty vehicles.

### Performance

API CF-4/CF, MAN 270

### Typical Specifications\*

SAE Viscosity Grade		40
Density, 15 °C, kg/liter	ASTM D4052	0,897
Flash Point, COC, °C	ASTM D92	254
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	126,3
Viscosity, 100 °C, mm <sup>2</sup> /s		14
Viscosity Index	ASTM D2270	109
Pour Point, °C	ASTM D97	-27

\* Values shown may differ between productions.



## Maxitrak Traktör Yağı Series Multigrade Tractor Oil

### Applications

Used for turbo diesel engines of agricultural machines including the latest models.

### Performance

API CF-4/CF

### Typical Specifications\*

SAE Viscosity Grade		15W-40	20W-50
Density, 15 °C, kg/liter	ASTM D4052	0,890	0,890
Flash Point, COC, °C	ASTM D92	240	260
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	92	167
Viscosity, 100 °C, mm <sup>2</sup> /s		13,70	20
Viscosity Index	ASTM D2270	150	136
Pour Point, °C	ASTM D97	-30	-18

\* Values shown may differ between productions.



## Superşarj Series Monograde High Quality Diesel Engine Oils

### Applications

Can be used in heavy duty vehicles.

### Performance

API CF/CF-4/SG, Allison C3, CAT TO-2, MIL-L-2104D

### Typical Specifications\*

SAE Viscosity Grade		10W	30	30(20TBN)	40	50
Density, 15 °C, kg/liter	ASTM D4052	0,886	0,890	0,902	0,900	0,899
Flash Point, COC, °C	ASTM D92	220	240	260	260	270
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	39,8	81	94	125	223
Viscosity, 100 °C, mm <sup>2</sup> /s		6	9,80	11	13	19,50
Viscosity Index	ASTM D2270	107	100	102	98	99
Pour Point, °C	ASTM D97	-30	-18	-18	-15	-12

\* Values shown may differ between productions.



### Spesiyal Series Monograde Diesel Engine Oils

#### Applications

Can be used in light commercial and heavy duty vehicles.

#### Performance

API SC/CB

#### Typical Specifications\*

SAE Viscosity Grade		10W	30	40
Density, 15 °C, kg/liter	ASTM D4052	0,877	0,891	0,894
Flash Point, COC, °C	ASTM D92	220	250	270
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	34	100,6	145
Viscosity, 100 °C, mm <sup>2</sup> /s		5,60	11,20	14
Viscosity Index	ASTM D2270	103	96	94
Pour Point, °C	ASTM D97	-30	-18	-15

\* Values shown may differ between productions.



### Kalibratör SAE 30 Monograde Engine Oil

#### Applications

Can be used for four-stroke engines using diesel oil or gasoline.

#### Performance

API CC

#### Typical Specifications\*

SAE Viscosity Grade		30
Density, 15 °C, kg/liter	ASTM D4052	0,889
Flash Point, COC, °C	ASTM D92	244
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	100,7
Viscosity, 100 °C, mm <sup>2</sup> /s		11,50
Viscosity Index	ASTM D2270	96
Pour Point, °C	ASTM D97	-18

\* Values shown may differ between productions.



# GEARBOX AND DIFFERENTIAL FLUIDS



**ATF CVT****Synthetic CVT Automatic Transmission Fluid****Applications**

They are used in the following applications:

• Audi Multitronic • BMW Mini Cooper EZL 799A/ 83 22 0 136 376/ 83 22 0 429 154 • Chery CVT • Daihatsu AMMIX CVTF DFE, CVT Fluid DC, CVT Fluid DFC, Fluid TC • Dodge/Jeep/Chrysler NS-2 • Dodge/Chrysler/Jeep/Mopar CVT+4 • Fiat Tutela Car CVT N.G • Fujijyuuko i-CVTF FG • GM/Saturn DEX-CVT, GM 1940713 and 1940714 • Honda HMMF, HCF2, Z-1, CVT • Hyundai/Kia CVT-1 / SP III • Idemitsu CVTF-EX1 • Lexus Fluid TC, Fluid FE • Mazda JWS 3320 • MG Rover EM-CVT • Mini Cooper EZL 799/EZL 799A/ZF • Mitsubishi CVT V1, CVTF-J1, CVTF-J4 and -J4+, CVTF ECO J4, SP-III • Nissan NS-1/2/3, N-CVT • Punch CVTF-EX1 • Renault Elf Matic CVT, CVT CK/SK/FK • Shell Green 1V • Subaru iCVT, iCVT FG, ECVT, Lineartronic chain CVT and CVT II Fluid, K0425Y0710 & K0425Y0711, Lineartronic High Torque (HT) CVT Fluid, CV-30, K0421Y0700, NS-2, iCVT FG • Suzuki CVTF TC, CVTF 3320, CVTF 4401, NS-2, CVT Green 1 & 2, CVT Green 1V • Toyota CVTF TC, CVTF FE • Volvo CVT 4959 • VW/Audi TL 521 16 (G 052 516), TL 521 80 (G 052 180 A2) • Zoty CVTs

**Typical Specifications\***

Density, 15 °C, kg/liter	ASTM D4052	0,844
Flash Point, COC, °C	ASTM D92	230
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	37
Viscosity, 100 °C, mm <sup>2</sup> /s		7,66
Viscosity Index	ASTM D2270	182
Pour Point, °C	ASTM D97	-42

\* Values shown may differ between productions.

**ATF DCT****Dual Clutch Transmission (DCT) Fluid****Applications**

It is used in the following applications:

• Audi	VW TL 052 182	• Mitsubishi	MZ320065 Dia-Queen SSTF-I
• Audi	VW TL 052 529	• Nissan	Ford M2C936A
• BMW (Getrag)	83 22 2 148 578, 83 22 2 148 579, 83 22 0 440 214, 83 22 2 147 477	• Peugeot	Peugeot/Citroen 9734.S2
• Citroen	Peugeot/Citroen 9734.S2	• Porsche (ZF)	Porsche Oil No. 999.917.080.00
• Ford/Getrag	Ford M2C936A	• Seat	VW TL 052 182
• Mercedes-Benz	MB 236.21(001 989 85 03)	• Skoda	VW TL 052 182
		• Volkswagen	VW TL 052 182
		• Volvo	1161838 1161839

**Typical Specifications\***

Density, 15 °C, kg/liter	ASTM D4052	0,855
Flash Point, COC, °C	ASTM D92	222
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	42
Viscosity, 100 °C, mm <sup>2</sup> /s		7,95
Viscosity Index	ASTM D2270	165
Pour Point, °C	ASTM D97	-42

\* Values shown may differ between productions.

**ATF 3****Synthetic Automatic Transmission and Power Steering Fluid****Applications**

Used in automatic transmission and steering gears of passenger cars and heavy vehicles; and used in mechanisms with hydraulic system if recommended.

**Performance**

Allison C4, GM Dexron III H, MAN 339 Type L1/V1/Z1/V2/Z2, MB 236.9, Voith 55.6336.XX (G1363), ZF TE-ML 03D/04D/14A/14B/14C/16L/17C

**Typical Specifications\***

Density, 15 °C, kg/liter	ASTM D4052	0,853
Flash Point, COC, °C	ASTM D92	220
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	36,9
Viscosity, 100 °C, mm <sup>2</sup> /s		7,70
Viscosity Index	ASTM D2270	183
Pour Point, °C	ASTM D97	-45

\* Values shown may differ between productions.

**ATF DX-3****Synthetic Automatic Transmission and Power Steering Fluid****Applications**

Used in automatic gear boxes and transmissions and in steering gears of passenger cars and heavy duty vehicles and in hydraulic mechanisms where recommended.

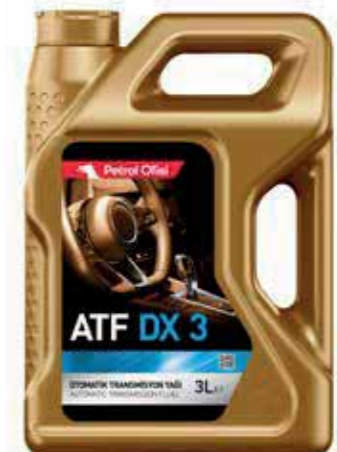
**Performance**

MAN 339 TYP L1/V1/Z1/V2/Z2, MB-Approval 236.1, VOITH H55.6335/55.6336, ZF 02F/03D/04D/9/11A/11B/14A/14B/16L/17C, Allison C-4/TES-389, CAT TO-2, Dexron IID/IIH, MB-236.5/236.6/236.7/236.9/236.10, MERCON, TASA, Volvo 97340/97341

**Typical Specifications\***

Density, 15 °C, kg/liter	ASTM D4052	0,860
Flash Point, COC, °C	ASTM D92	220
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	41
Viscosity, 100 °C, mm <sup>2</sup> /s		7,90
Viscosity Index	ASTM D2270	167
Pour Point, °C	ASTM D97	-42

\* Values shown may differ between productions.





## ATF II Synthetic Automatic Transmission Fluid

### Applications

Used in automatic transmission and steering gears of passenger cars and heavy vehicles; and used in mechanisms with hydraulic system if recommended.

### Performance

MAN 339 Type Z1 & V1, MB-Approval 236.1, GM Allison C4, GM Dexron IID, CAT TO-2, ZF 02F/04D/14A/17C, Voith 55,6355,Volvo 97340, MB 236.5/236.6/236.7, MERCON, TASA

### Typical Specifications\*

Density, 15 °C, kg/liter	ASTM D4052	0,863
Flash Point, COC, °C	ASTM D92	200
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	39
Viscosity, 100 °C, mm <sup>2</sup> /s		7,80
Viscosity Index	ASTM D2270	176
Pour Point, °C	ASTM D97	-42

\* Values shown may differ between productions.



## TMS Oil 970 Series High Performance Transmission Oil For Off-Highway Vehicles

### Applications

Suitable for transmissions of construction equipments requiring CAT TO-4, GM Allison C4 and Komatsu Micro Clutch specifications.

### Performance

Caterpillar TO-4/2 Komatsu KES 07.868.1, Allison C4, API GL-4, Euclid, Sperry Vickers/Eaton I-280-S, Vickers M-2950-S, Tremac/TTC

### Typical Specifications\*

TMS OIL		971	973	975
SAE Viscosity Grade		10W	30	50
Density, 15 °C, kg/liter	ASTM D4052	0,880	0,900	0,910
Flashing Point, COC, °C	ASTM D92	230	250	250
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	40	109	217,7
Viscosity, 100 °C, mm <sup>2</sup> /s		6,30	11,70	18,50
Viscosity Index	ASTM D2270	105	96	94
Pour Point, °C	ASTM D97	-33	-27	-14

\* Values shown may differ between productions.



## Maxitrac TMS Oil 500 High Performance Transmission and Hydraulic Oil

### Applications

Used in hydraulics, transmissions and wet brakes of agricultural, construction and industrial vehicles. Meets the specifications of OEM manufacturers which recommend UTTO type lubricant.

### Performance

API GL-4, Allis-Chalmers Power Fluid 821, AGCO-Allis Power Fluid 821XL, AGCO Massey-Ferguson M1135/M1141, Allison C-2, C-3 and C-4, Case International: MS-1204, 1205, 1206, 1207, Case-IH MS-1210, JIC 145 JI Case JIC 143 / 144, CNH Case/New Holland MAT 3525, CAT TO-2, Deutz-Allis 272843, 257541, 246634, ESNM2C41-B, ESN-M2C43, ESN-M2C48-A and ESN-M2C48-B, ESN-M2C53-A and ESN-M2C53-B, ESN M2C92-A, ESN-M2C134-A, B, C, D (Current), FNHA-2-C-201, Ford and New Holland FNHA-2-C-200A, Hesston-Fiat: (tractors only) AF-87, Multi-F, International Farmall MS-1204, JIC 185, International Harvester B-5, B-6 (International Harvester), John Deere: JDM J20A and J20B JDM J20C and J20D JDM J14B and J14C JDM J21A JDT 303 Quatrol, Komatsu Dresser: B-06-0001 and B-06-0002, Kubota: UDT (Current), Massey-Ferguson M-1110, M-1127A, M-1127B, M-1129A, M-1135 (Current Worldwide), M-1141 (Current EP THF) M-1143 (Finished Oil) M-1145 (Finished Oil), MAT 3225 / Nexptore fluid, 3525, 3526 (Current), Minneapolis-Moline Q-1766, Multi G 134/NH410B (FNHA-2-C-201), Multi-G (Current), New Idea Q-1802, New Holland (Fiat): FNHA-2-C-200, Oliver Q-1705, Type 55, Q-1722, Q-1766B, Renk Doromat: 873 874 A and 874 B (current), Sperry-Vickers 35VQ25 and M-2952-S (Vickers), I-286-S (Vickers), M-2950-S (Vickers), Steiger SEMS 17001 (Steiger), Versatile Specification 23M or 24M (Versatile), Volvo CE WB-101, White Farm Equipment Q-1826 (Current), ZF TE-ML 03E/03F/05E/05F/06K/17E/21F

### Typical Specifications\*

SAE Viscosity Grade		10W-30
Density, 15 °C, kg/liter	ASTM D4052	0,890
Flash Point, COC, °C	ASTM D92	230
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	62
Viscosity, 100 °C, mm <sup>2</sup> /s		9,70
Viscosity Index	ASTM D2270	140
Pour Point, °C	ASTM D97	-33

\* Values shown may differ between productions.



## Maxitrac Transmisyon 300 Power Transmission Oil For Agricultural Vehicles

### Applications

It is used in powertrain systems, brakes, hydraulic systems, final drive units, differentials and transmissions of tractors and construction equipment in agricultural industry, automotive and industrial sectors. It is recommended as power transmission fluid for all systems of contemporary tractors except the engine.

### Performance

Ford ESEN M2C 86B, Massey Ferguson CMS M1135

### Typical Specifications\*

Density, 15 °C, kg/liter	ASTM D4052	0,890
Flash Point, COC, °C	ASTM D92	240
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	84,5
Viscosity, 100 °C, mm <sup>2</sup> /s		10,8
Viscosity Index	ASTM D2270	113
Pour Point, °C	ASTM D97	-27

\* Values shown may differ between productions.



## Torque Fluid 32 Paraffinic Based Transmission Oil

### Applications

Used in hydraulic torque converters and transmissions of heavy vehicles and equipments, and hydraulic transmissions of locomotives.

### Typical Specifications\*

Density, 15 °C, kg/liter	ASTM D4052	0,880
Flash Point, COC, °C	ASTM D92	220
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	33
Viscosity, 100 °C, mm <sup>2</sup> /s		5,40
Viscosity Index	ASTM D2270	96
Pour Point, °C	ASTM D97	-30

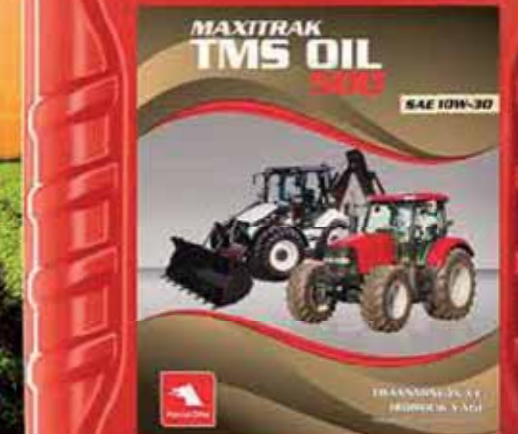
\* Values shown may differ between productions.



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Wearing



### Specifications and approvals met

- SAE 10W -30 AP1 GL -4
- Volvo CE W8-101
- ZFTE -ML 03E, 05F, 06K, 17E, 21F
- Massey -Ferguson M1135, M1141, M1143, M1145
- John Deere JDM, J20A, J20B, J20C, J20D, ve J21A
- Case IH MS-1204, MS-1205, MS-1206, MS-1207, MS-1210
- New Holland FNHA -2-C-200A, FNHA -2-C-201, NH 410C, MAT 3225, 3525, 3526

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- Reduces coupling vibrations.
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## Maxigear S 75W-80

### Full Synthetic Long-Life Transmission Oil

#### Applications

Maxigear S 75W-80 is developed for buses and commercial vehicles operating under extremely heavy duty, where particularly long oil change intervals are recommended, for use in ZF gear boxes with or without interarder systems.

#### Performance

API GL-4, Eaton Europe (300,000 km or 3 years), DAF, Iveco, MAN 341 Type Z3/Z4, MIL-L-2105, Renault, Volvo 97307, ZF TE-ML 01L/02L/16K/08/13/24A

#### Typical Specifications\*

SAE Viscosity Grade		75W-80
Density, 15 °C, kg/liter	ASTM D4052	0,860
Flash Point, COC, °C	ASTM D92	230
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	51,8
Viscosity, 100 °C, mm <sup>2</sup> /s		8,90
Viscosity Index	ASTM D2270	153
Pour Point, °C	ASTM D97	-39

\* Values shown may differ between productions.



## Maxigear D 75W-90

### Full Synthetic Long-Life Transmission and Axle Oil

#### Applications

Maxigear D 75W-90 is developed for commercial vehicles operating under very heavy workloads. Suitable for particularly long oil change intervals.

#### Performance

API GL-5, MIL-PRF-2105E, MAN 341 TYP Z2, 342 TYP S1, MB-Approval 235.8, ZF TE-ML 02B/05B/12L/12N/16F/17B/19C/21A, VOLVO 97312, DAF, IVECO, DETROIT DIESEL DFS93K219.01, SCANIA STO 2:0A/1:1G/1:0

#### Typical Specifications\*

SAE Viscosity Grade		75W-90
Density, 15 °C, kg/liter	ASTM D4052	0,870
Flash Point, COC, °C	ASTM D92	280
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	108
Viscosity, 100 °C, mm <sup>2</sup> /s		15,0
Viscosity Index	ASTM D2270	155
Pour Point, °C	ASTM D97	-39

\* Values shown may differ between productions.



## Maxigear EP-X 75W-90

### High Quality Automotive Gear Oil

#### Applications

Maxigear EP-X 75W-90, is developed for manual transmissions and differentials of passenger cars and heavy duty vehicles that needs API GL-5 performance level.

#### Performance

API GL-5/MT-1, MIL-L-2105D

#### Typical Specifications\*

SAE Viscosity Grade		75W-90
Density, 15 °C, kg/liter	ASTM D4052	0,860
Flash Point, COC, °C	ASTM D92	200
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	99
Viscosity, 100 °C, mm <sup>2</sup> /s		16
Viscosity Index	ASTM D2270	172
Pour Point, °C	ASTM D97	-33

\* Values shown may differ between productions.



## Maxigear EP-X 80W-90

### High Quality Automotive Gear Oil

#### Applications

Maxigear EP-X 80W-90 is developed for all vehicles operating under all types of workloads. It is used in the gear systems of all passenger cars and heavy duty vehicles that need API GL-4/5 performance level.

#### Performance

API GL-4/5/MT-1, MAN 342 Type M2, MB 235.0, MIL-L-2105D, ZF TE-ML 05A/12E/16B/17B/19B/21A

#### Typical Specifications\*

SAE Viscosity Grade		80W-90
Density, 15 °C, kg/liter	ASTM D4052	0,900
Flash Point, COC, °C	ASTM D92	220
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	180
Viscosity, 100 °C, mm <sup>2</sup> /s		17
Viscosity Index	ASTM D2270	95
Pour Point, °C	ASTM D97	-24

\* Values shown may differ between productions.





## Maxigear EP-X LS Series

### High Quality Limited Slip Automotive Gear Oil

#### Applications

Can be used in buses, trucks, passenger cars, work machines. Not recommended for use in ATF transmission boxes.

#### Performance

API GL-5, ZF TE-ML 05C-12C-21C

#### Typical Specifications\*

SAE Viscosity Grade		85W-90	85W-140
Density, 15 °C, kg/liter	ASTM D4052	0,900	0,890
Flash Point, COC, °C	ASTM D92	220	220
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	160	386,15
Viscosity, 100 °C, mm <sup>2</sup> /s		15,50	27
Viscosity Index	ASTM D2270	100	97
Pour Point, °C	ASTM D97	-24	-15

\* Values shown may differ between productions.



## Maxigear Tech EP-X 80W-90

### High Quality Automotive Gear Oil

#### Applications

Maxigear Tech EP-X 80W-90, is used in the powertrain systems, transmissions and differentials of heavy duty vehicles that need API GL-5 performance level. It can be used in passenger cars, busses, trucks, off-highway vehicles, construction vehicles, mining equipments and agricultural machines. It is not recommended for automatic transmissions.

#### Performance

API GL-5, MAN 342 Type M3, MB-Approval 235.20, ZF TE-ML 05A/12L/12M/16B/17B/19B/21A

#### Typical Specifications\*

SAE Viscosity Grade		80W-90
Density, 15 °C, kg/liter	ASTM D4052	0,900
Flash Point, COC, °C	ASTM D92	200
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	140
Viscosity, 100 °C, mm <sup>2</sup> /s		14
Viscosity Index	ASTM D2270	103
Pour Point, °C	ASTM D97	-27

\* Values shown may differ between productions.



## Maxigear EP-X 85W-140

### High Quality Automotive Gear Oil

#### Applications

Maxigear EP-X 85W-140 is used in differentials of heavy duty vehicles that need API GL-5 performance level.

#### Performance

API GL-5, MIL-L-2105D

#### Typical Specifications\*

SAE Viscosity Grade		85W-140
Density, 15 °C, kg/liter	ASTM D4052	0,910
Flash Point, COC, °C	ASTM D92	220
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	347
Viscosity, 100 °C, mm <sup>2</sup> /s		25,60
Viscosity Index	ASTM D2270	97
Pour Point, °C	ASTM D97	-15

\* Values shown may differ between productions.



## Maxigear Tech EP 80W

### High Quality Automotive Gear Oil

#### Applications

Maxigear Tech EP 80W, is especially developed for Mercedes-Benz and ZF manual transmissions. It is suitable for manual transmissions of vehicles that need API GL-4 performance level.

#### Performance

API GL-4, MIL-L-2105, MB-Approval 235.1, ZF TE-ML 06L/08/16A/17A/19A/19C/24A

#### Typical Specifications\*

SAE Viscosity Grade		80W
Density, 15 °C, kg/liter	ASTM D4052	0,880
Flash Point, COC, °C	ASTM D92	218
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	54,7
Viscosity, 100 °C, mm <sup>2</sup> /s		7,90
Viscosity Index	ASTM D2270	110
Pour Point, °C	ASTM D97	-30

\* Values shown may differ between productions.



## Maxigear Tech EP-X 90 High Quality Automotive Gear Oil

### Applications

Maxigear Tech EP-X 90, is especially developed for Mercedes-Benz and ZF. It is suitable for differentials of all vehicles that need API GL-5 performance level.

### Performance

API GL-5, MB 235.0, DAF, MIL-L-2105D, Voith 132.00374400, ZF TE-ML 07A/ZF 08/16B/16C/16D/17B/19B/21A/24A

### Typical Specifications\*

SAE Viscosity Grade		90
Density, 15 °C, kg/liter	ASTM D4052	0,900
Flash Point, COC, °C	ASTM D92	200
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	156
Viscosity, 100 °C, mm <sup>2</sup> /s		15
Viscosity Index	ASTM D2270	95
Pour Point, °C	ASTM D97	-12

\* Values shown may differ between productions.



## Maxigear Series Automotive Transmission Oil

### Applications

Used in the gear boxes and differentials of automotive and industrial type equipment where extreme pressure characteristics are not required.

### Performance

API GL-1

### Typical Specifications\*

SAE Viscosity Grade		90	140
Density, 15 °C, kg/liter	ASTM D4052	0,890	0,900
Flash Point, COC, °C	ASTM D92	260	300
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	185	356
Viscosity, 100 °C, mm <sup>2</sup> /s		16,60	25
Viscosity Index	ASTM D2270	95	96
Pour Point, °C	ASTM D97	-15	-6

\* Values shown may differ between productions.



## Maxigear EP Series High Quality Automotive Transmission Oil

### Applications

Used in automotive differentials, manual transmissions and hypoid gears of passenger vehicles, heavy-duty vehicles and off-highway vehicles operating under high-speed/low-torque and low-speed/high-torque condition.

### Performance

API GL-4, MIL-L-2105

### Typical Specifications\*

SAE Viscosity Grade		80W	90	140	75W-80	75W-85	80W-90
Density, 15 °C, kg/liter	ASTM D4052	0,890	0,890	0,900	0,850	0,860	0,890
Flashing Point, COC, °C	ASTM D92	240	260	236	220	232	230
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	84	160	379	48	68	147
Viscosity, 100 °C, mm <sup>2</sup> /s		10	15	26	7,90	11,50	15
Viscosity Index	ASTM D2270	99	95	93	131	163	100
Pour Point, °C	ASTM D97	-30	-21	-9	-39	42	-24

\* Values shown may differ between productions.



# MARINE OILS



## Deniz Dizel Series

### Applications

For crankcase in piston type marine diesel engines and cylinder oils in crosshead type engines.

### Performance

API CF



### Typical Specifications\*

		1000 Series		2000 Series		3000 Series		4000 Series
		30	40	30	40	30	40	40
SAE Viscosity Grade		30	40	30	40	30	40	40
Density, 15 °C, kg/liter	ASTM D4052	0,900	0,900	0,900	0,900	0,910	0,910	0,910
Flash Point, COC, °C	ASTM D92	262	262	264	264	250	250	260
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	90	144	95	142	90	150	139
Viscosity, 100 °C, mm <sup>2</sup> /s		10,30	14,30	11	14,50	10,20	14,60	14
Viscosity Index	ASTM D2270	100	97	100	98	102	97	98
T.B.N., mgKOH/gr	ASTM D2896	12	12	22	22	32	32	41
Pour Point, °C	ASTM D97	-18	-21	-18	-21	-18	-21	-12

\* Values shown may differ between productions.

## Maximarine CYL Series

### Applications

It is used to lubricate the cylinders of new generation two-stroke marine engines operating under heavy mechanical load and thermal conditions, and using low or high sulfur fuel.



### Typical Specifications\*

		MAXIMARINE	MAXIMARINE	MAXIMARINE	MAXIMARINE	MAXIMARINE	MAXIMARINE
		CYL 20	CYL 25	CYL 40	CYL 55	CYL 70	CYL 100
SAE Viscosity Grade		50	50	50	50	50	50
Density, 15 °C, kg/liter	ASTM D4052	0,900	0,900	0,934	0,927	0,935	0,952
Flash Point COC, °C	ASTM D92	270	270	270	270	270	270
Viscosity, 100 °C, mm <sup>2</sup> /s	ASTM D445	19	19	19	19	19	19
Viscosity Index	ASTM D2270	98	98	98	98	98	98
T.B.N., mgKOH/gr	ASTM D2896	20	25	40	55	70	100
Pour Point, °C	ASTM D97	-15	-15	-15	-15	-15	-15

\* Values shown may differ between productions.



## Marine System Oil

### Applications

They are used in the oil pan of the low-speed marine diesels.

### Performance

API CF

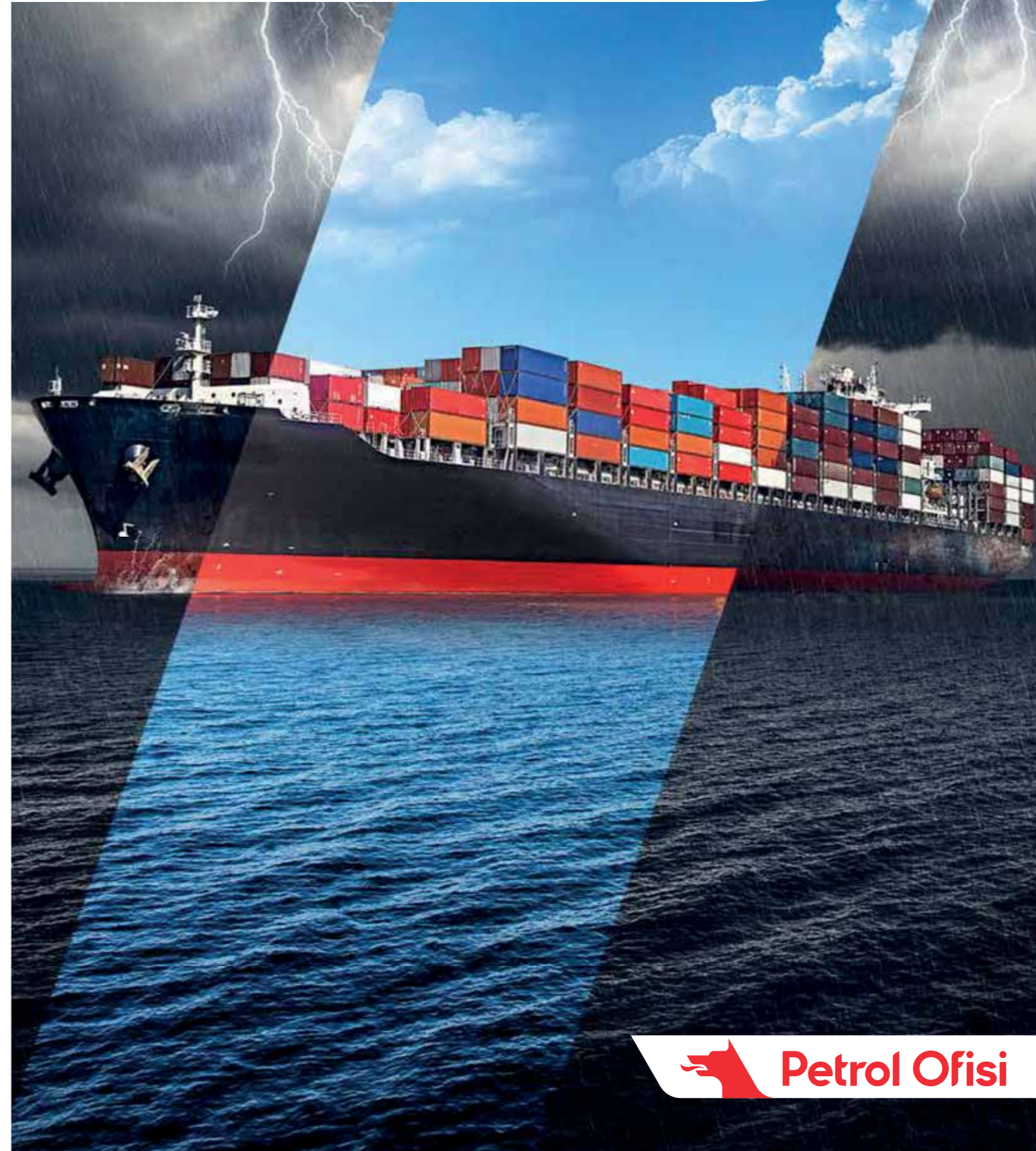
### Typical Specifications\*

SAE Viscosity Grade		30
Density, 15 °C, kg/liter	ASTM D4052	0,890
Flash Point, COC, °C	ASTM D92	244
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	102
Viscosity, 100 °C, mm <sup>2</sup> /s		12
Viscosity Index	ASTM D2270	104
T.B.N., mgKOH/gr	ASTM D2896	6
Pour Point °C	ASTM D97	-15

\* Values shown may differ between productions.



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## Alüminyum Tel Çekme Yağı Wire Drawing Oil

### Applications

It can be used safely in all kind of wire drawing processes due to its high qualified additives.

### Typical Specifications\*

Density, 15 °C, kg/liter	ASTM D4052	0,890
Flash Point, COC, °C	ASTM D92	288
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	220
Viscosity, 100 °C, mm <sup>2</sup> /s		20,41
Viscosity Index	ASTM D2270	106
Pour Point °C	ASTM D97	6

\* Values shown may differ between productions.



# INDUSTRIAL OILS

## Bor Yağı

### Emulsifiable, Multi-Purpose Metal Cutting Fluid

### Applications

It is suitable to use as lubricant and coolant for light and heavy machining operations of metals like aluminum and copper alloys, soft and cast iron (machining operations) and drawing of aluminum bars (non-machining operations). It provides excellent cooling. Warning: Oil addition process should be held slowly while the system water is in circulation. Oil should not be added to water directly. Before new emulsion is prepared, water tank should be emptied completely and cleaned thoroughly. Meanwhile, emulsion should be prepared in a separate tank in suitable concentration and then should be added into the system.

### Typical Specifications\*

Density, 15 °C, kg/litre	ASTM D4052	0,885
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	40,1
Refractive Index	ASTM D1218	1
Emulsion pH 20 °C (mixed with deionized water in 5%)	ASTM D1287	8,57

\* Values shown may differ between productions.





## Cleancut 200

### Metal Cutting Fluid for Light/Medium Operations

#### Applications

Intended for light- and medium-duty operations for treating cast, carbon steel and alloy steel as well as some non-ferrous metals, universal processes

#### Typical Specifications\*

Appearance	Visual	Light Amber
Density, 15 °C, kg/liter	ASTM D4052	1,010
Emulsion pH, 20 °C (3% mixture with deionized water)	ASTM D1287	9,6

\* Values shown may differ between productions.



## Procut HD

### Neat Cutting Oil for Heavy Duty Metal Cutting Operations

#### Applications

Specially developed for ultra heavy-duty metalworking conditions. Intended for a wide range of metalworking operations including screw cutting, milling, drilling and cutting on automatic lathes and screw cutters.

#### Typical Specifications\*

Density, 15 °C, kg/liter	ASTM D4052	0,890
Flash Point, COC, °C	ASTM D92	206
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	35,7
Pour Point, °C	ASTM D97	-12

\* Values shown may differ between productions.



## Cleancut 300

### Metal Cutting Fluid for Medium/Heavy Operations

#### Applications

Medium- and heavy-duty operations for treating high-alloy steels as well as aluminium and non-ferrous metals, universal processes.

#### Typical Specifications\*

Appearance	Visual	Light Amber
Density, 15 °C, kg/liter	ASTM D4052	1,020
Emulsion pH, 20 °C (3% mixture with deionized water)	ASTM D1287	9,5

\* Values shown may differ between productions.



## Procut LD

### Neat Cutting Oil for Light Duty Metal Cutting Operations

#### Applications

It is formulated for cutting operations of metals with low-middle hardness level. Suitable for many cutting operations.

#### Typical Specifications\*

Density, 15 °C, kg/liter	ASTM D 4052	0,880
Flash Point, COC, °C	ASTM D 92	208
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D 445	28,8
Pour Point, °C	ASTM D 97	-27

\* Values shown may differ between productions.





## Procut A

### Neat Cutting Oil for High-Speed Metal Cutting Operations

#### Applications

Recommended for deep drilling of ferrous and non-ferrous materials, particularly aluminium alloys. Intended for high-speed milling and honing operations. Shavings and excessive metal loss are avoided, thanks to its perfect cutting, cooling and flushing functions during drilling. Chlorine-free.

#### Typical Specifications\*

Density, 15 °C, kg/liter	ASTM D4052	0,870
Flash Point, COC, °C	ASTM D92	182
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	18,1
Pour Point, °C	ASTM D97	-15

\* Values shown may differ between productions.



## Heat Transfer Oil 32

### Heat Transfer Oil

#### Applications

It is produced with refined paraffin base oils. It does not have any corrosive effect on steel and copper and performs remarkable thermal stability and oxidation resistance. It can be safely used for close and open systems up to 315 °C and 200 °C temperatures, respectively. It has high specific heat and thermal conductivity. Its volatility is low, featuring good performance at low temperatures.

#### Typical Specifications\*

ISO Viscosity Grade		32
Density, 15 °C, kg/liter	ASTM D4052	0,880
Flash Point COC, °C	ASTM D92	220
Flash Point PMCC, °C	ASTM D93	210
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	32
Viscosity, 100 °C, mm <sup>2</sup> /s		5,36
Viscosity Index	ASTM D2270	100
Pour Point, °C	ASTM D97	-12

\* Values shown may differ between productions.



## Compressor Oil SP Series

### Synthetic Compressor Oil

#### Applications

Developed to use for cooling and lubricating of screw and rotary compressors. Formulated to maintain the maximum performance of the compressors during operation.

#### Performance

DIN 51506 VDL, DIN 51524 HLP, GM LJ, SAE MS1003-2

#### Typical Specifications\*

ISO Viscosity Grade		46	68
Density, 15 °C, kg/liter	ASTM D4052	0,850	0,860
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	46,3	69,3
Viscosity Index	ASTM D2270	135	138
Flash Point, °C	ASTM D92/93	>250	>250
Pour Point, °C	ASTM D97	-33	-33
TAN, mgKOH/gr	ASTM D974	0,33	0,33

\* Values shown may differ between productions.



## Compressor Oil XT Series

### High Performance, Mineral Based, Zinc -Free Compressor Oils

#### Applications

Specially designed for reciprocating and rotary screw type air compressors.

#### Performance

DIN 51506 Type VDL, DIN 54506 Type VBL, DIN 51517-1 Type C, DIN 51517-2 Type CL

#### Typical Specifications\*

ISO Viscosity Grade		32	46	68	100
Density, 5 °C, kg/liter	ASTM4052	0,870	0,881	0,880	0,890
Flash Point, COC, °C	ASTM D92/93	>210	>220	>230	>240
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	32	46	68	100
Viscosity Index	ASTM D2270	102	101	100	98
Pour Point, °C	ASTM D97	-30	-27	-24	-21

\* Values shown may differ between productions.



## Kalıp Yağı M Series Aerated Concrete Mold Oil

### Applications

It is applied on the surfaces of big size aerated concrete molds by spraying or with a brush to prevent sticking on the concrete.

### Typical Specifications\*

		M8	M22	M24	M26
Density, 15 °C, kg/liter	ASTM D4052	0,870	0,900	0,900	0,880
Flash Point COC, °C	ASTM D92	184	248	260	230
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	19,7	97,3	137,1	67,73
Viscosity, 100 °C, mm <sup>2</sup> /s		4,01	10,60	13,55	8,59
Viscosity Index	ASTM D2270	99	90	90	97
Pour Point, °C	ASTM D97	-12	-9	-9	-20

\* Values shown may differ between productions.



## Gravis PG 220 High Performance Synthetic Industrial Gear Oil

### Applications

It is recommended particularly for roll bearings operating under elevated temperatures. It can be used in dry cutting process of paper machine, calender bearings, plastic mixers, textile machines, wind power plants, lift gear systems (be cautious for equipment manufacturers recommendation in hypoid gear systems)

### Performance

David Brown G Lubricant, Defense Standard 05-50.1 No 29, DIN 51517 Part 3

### Typical Specifications\*

ISO Viscosity Grade		220
Density, 15 °C, kg/liter	ASTM D4052	1,006
Flash Point, COC, °C	ASTM D92	260
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	220
Viscosity, 100 °C, mm <sup>2</sup> /s		31
Viscosity Index	ASTM D2270	170
Pour Point, °C	ASTM D97	-30

\* Values shown may differ between productions.



## Gravis SP Series High Performance Synthetic Industrial Gear Oil

### Applications

Reliably used in worm gears and circulation systems. Due to its high viscosity index, it is ideal for applications subject to significant heat variations. Particularly recommended for calender bearings, spur gears, helical gears and conical gears as well as sealed gearboxes that may incorporate any range of gears operating at high temperatures. Highly suitable for running gears without hardened surfaces, heavy-duty gears operating at high temperatures and corrosive conditions, or applications incorporating precision oil filters. Thanks to its high-shear stability, the oil film formed maintains lubrication without tear even under high tensile stress. Likewise, it has superior thermal stability and oxidation resistance.

### Performance

DIN 51517-3, AIST 224, AGMA 9005-E02, ANSI, ISO 12925-1 (CKD), Hansen Oil HP1/ HP2/HPP/14/P4 & M4ACC, FLENDER GEAR

### Typical Specifications\*

ISO Viscosity Grade		100	150	220	320	460	680
Density, 15 °C, kg/liter	ASTM D4052	0,850	0,858	0,860	0,862	0,863	0,860
Flash Point, COC, °C	ASTM D92	240	244	250	254	258	264
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	100	150	220	320	460	680
Viscosity, 100 °C, mm <sup>2</sup> /s		14,25	19,30	29	37	55	77,50
Viscosity Index	ASTM D2270	>160	>165	>170	>175	>180	>185
Pour Point, °C	ASTM D97	-45	-42	-42	-39	-36	-27

\* Values shown may differ between productions.



## Gravis SP-X Series New Technology High Performance Industrial Gear Oil

### Applications

It is recommended particularly for roll bearings operating under elevated temperatures, spur, helical and bevel gears, as well as enclosed gear-boxes containing any type of gear.

### Performance

AIST 224 (US Steel 224) IEC 61400-4, ANSI/AGMA 9005-E02, DIN 51517 Part 3, Flender Revision 16, Hansen Oil HP1/ HP2/HPP/14/P4 & M4ACC, ISO 12925-1 (CKD)

### Typical Specifications\*

ISO Viscosity Grade		150	220	320	460	680
Density, 15 °C, kg/liter	ASTM D4052	0,870	0,880	0,890	0,890	0,900
Flash Point, COC, °C	ASTM D92	>240	>240	>240	>240	>240
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	150	220	320	460	680
Viscosity, 100 °C, mm <sup>2</sup> /s		20	30	40	50	60
Viscosity Index	ASTM D2270	164	166	167	170	170
Pour Point, °C	ASTM D97	-39	-36	-33	-30	-27

\* Values shown may differ between productions.



## Gravis MP Series High Quality Industrial Gear Oil

### Applications

It is recommended to use in applications that require Flender AG specifications to provide resistance against scratching of the surfaces of the mating gears during the slipping-rolling motion, micro-pitting and cracking. It can be used in all kind of gearbox designs, including worm gear sets.

### Performance

DIN 51517 Part 3, AIST 224, AGMA 9005-F16 Antiscuff, Siemens MD Revision 15 AGMA 9005-E02, SEB 181226, David Brown S1.53.101 E, FLENDER Revision 15

### Typical Specifications\*

ISO Viscosity Grade		150	220	320	460
Density, 15 °C, kg/liter	ASTM D4052	0,896	0,898	0,901	0,902
Flash Point COC, °C	ASTM D92	260	270	282	290
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	150	220	320	460
Viscosity, 100 °C, mm <sup>2</sup> /s		14,65	18,90	23,90	30,10
Viscosity Index	ASTM D2270	96	96	95	94
Pour Point, °C	ASTM D97	-21	-18	-12	-9

\* Values shown may differ between productions.



## Tekstil Yağı 15 K

### Applications

Suitable for in a wide variety of textile machines, pins of twisting and wrapping loom and knot machines. Used in also hydraulic systems, bearings and in case of low viscosity lubricant needed.

### Typical Specifications\*

ISO Viscosity Grade		15
Density, 15 °C, kg/liter	ASTM D4052	0,870
Flash Point COC, °C	ASTM D92	196
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	15
Viscosity, 100 °C, mm <sup>2</sup> /s		3,60
Viscosity Index	ASTM D2270	94
Pour Point, °C	ASTM D97	-12

\* Values shown may differ between productions.



## Gravis M Series Industrial Gear Oil

### Applications

It is designed to use in all types of enclosed gearboxes. It is recommended mainly for cement, iron and steel industries, where severe and impact loads are encountered. It is used in gear systems of rolling stands, piling machines, cranes, excavators, conveyors, machine tools and elevators.

### Performance

DIN 51517 Part 3, AIST 224, David Brown S1.53.101, AGMA 9005-E02, FAG FE-8

### Typical Specifications\*

ISO Viscosity Grade		68	100	150	220	320	460	680	1000	1500
Density, 15 °C, kg/liter	ASTM D4052	0,884	0,888	0,893	0,897	0,900	0,902	0,913	0,909	0,911
Flash Point COC, °C	ASTM D92	>220	>250	>250	>250	>250	>250	>250	>250	>250
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	68	100	150	220	320	460	680	1000	1500
Viscosity, 100 °C, mm <sup>2</sup> /s		8,65	11,25	14,65	18,90	23,95	30,40	39,50	52,8	74,81
Viscosity Index	ASTM D2270	>90	>90	>90	>90	>90	>90	>90	>90	>90
Pour Point, °C	ASTM D97	-24	-24	-21	-18	-12	-12	-9	-6	-6

\* Values shown may differ between productions.



## Hydro Tech HVI-E Series Synthetic Hydraulic System Oil

### Applications

This is recommended for plastic injection and rolling machines, construction equipment, presses, moving construction equipment, air compressors and all industrial and moving hydraulic systems and the hydraulic systems of the vessels. It may be used for equipment with high difference between the ambient temperature and the working temperature.

### Performance

Bosch 90220, Cincinnati P 68, P 70, DIN 51524 Part III (HVLPL), Eaton M-2950 S/I-286 S3, ISO 20763 Conestoga Vane Pump Tests, JCMAS P041 HK, Parker HF-0, HF-1

### Typical Specifications\*

ISO Viscosity Grade		32	46
Density, 15 °C, kg/liter	ASTM D4052	0,840	0,850
Flash Point COC, °C	ASTM D92	220	240
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	32	46
Viscosity, 100 °C, mm <sup>2</sup> /s		6,70	8,70
Viscosity Index	ASTM D2270	177	171
Pour Point, °C	ASTM D97	-39	-39





## Hydro Tech HVI TX Series

### New Generation High Viscosity Index Zinc-Free Hydraulic Oil

#### Applications

It is recommended in the fixed and moveable hydraulic systems where the moderate and heavy working conditions are in question and where the characteristics of intense abrasion, corrosion, oxidation protection, water separation and working compatibility with yellow metals are important. It can be used in the hybrid and all the other pumps, the systems working with sensitive valves, the systems requiring long life and high performance in an environment with water.

#### Performance

Bosch 90220, Cincinnati P 68, 69, 70 (approval), DIN 51524 Part III (HVLP), Eaton M-2950 S/I-286 S3, Parker HF-0, HF-1, HF-2 (approval)

#### Typical Specifications\*

ISO Viscosity Grade		32	46	68
Density, 15 °C, kg/liter	ASTM D4052	0,859	0,874	0,876
Flash Point COC, °C	ASTM D92	212	220	230
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	32	46	68
Viscosity, 100 °C, mm <sup>2</sup> /s		6,31	8,15	10,95
Viscosity Index	ASTM D2270	152	152	152
Pour Point, °C	ASTM D97	-42	-42	-39

\* Values shown may differ between productions.



## Hydro Oil AW 46

### High Performance Hydraulic System Oil

#### Applications

It is recommended for all industrial and mobile hydraulic systems. Among its special industrial applications include construction machines, presses, moveable construction equipment, plastic injection, towing machines and screw-type air compressors. It is also suitable for Arburg and Engel brand machines.

#### Performance

Arburg, Bosch 90220, Cincinnati P 70, DIN 51524 Part II (HLP), Eaton M-2950 S/I-286 S3, Müller Weingarten

#### Typical Specifications\*

ISO Viscosity Grade		46
Density, 15 °C, kg/liter	ASTM D4052	0,870
Flash Point COC, °C	ASTM D92	236
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	46
Viscosity, 100 °C, mm <sup>2</sup> /s		6,80
Viscosity Index	ASTM D2270	100
Pour Point, °C	ASTM D97	-24

\* Values shown may differ between productions.



## Hydro Tech HVI Series

### High Performance and High Viscosity Index Hydraulic System Oils

#### Applications

It is recommended for all industrial non-stationary hydraulic and vessel hydraulic systems. Among its special industrial applications include construction machines, pressing machine, moveable construction equipment, plastic injection and air compressor.

#### Performance

Bosch 90220, Cincinnati P 68, 69, 70, DIN 51524 Part III (HVLP), Eaton M-2950 S/I-286 S3, ISO 20763 Conestoga Vane Pump Tests, JCMAS P041 HK, Parker HF-0, HF-1, HF-2 (ISO VG 32, 46, 68 için onaylı)

#### Typical Specifications\*

ISO Viscosity Grade		15	32	46	68	100
Density, 15 °C, kg/liter	ASTM D4052	0,851	0,872	0,876	0,878	0,884
Flash Point, COC, °C	ASTM D92	150	208	214	216	240
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	15	32	46	68	100
Viscosity, 100 °C, mm <sup>2</sup> /s		4,17	6,60	8,75	11,80	15,60
Viscosity Index	ASTM D2270	200	168	173	171	166
Pour Point, °C	ASTM D97	-42	-39	-39	-36	-33

\* Values shown may differ between productions.



## Hydro Oil HD Series

### High Performance Hydraulic System Oil

#### Applications

It is recommended to all industrial and moving hydraulic systems. Among its special industrial applications include construction machines, presses, moving construction equipment, plastic injection and drawing machines and screw-type air compressors.

#### Performance

Bosch Rexroth RDE 90235, Cincinnati P 70, (ISO VG 32, 46, 68 için onaylı), DIN 51524 Part II (HLP), Eaton M-2950 S/I-286 S3, ISO 20763 Conestoga Vane Pump Tests, JCMAS P041 HK, Parker HF-0, HF-1, HF-2

#### Typical Specifications\*

ISO Viscosity Grade		10	22	32	46	68	100	150	220
Density, 15 °C, kg/liter	ASTM D4052	0,857	0,869	0,877	0,880	0,886	0,888	0,894	0,899
Flash Point COC, °C	ASTM D92	138	202	220	236	242	248	266	266
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	10	22	32	46	68	100	150	220
Viscosity, 100 °C, mm <sup>2</sup> /s		2,66	4,31	5,36	6,76	8,73	11	14,45	18,50
Viscosity Index	ASTM D2270	100	101	101	100	100	94	94	93
Pour Point, °C	ASTM D97	-33	-30	-27	-24	-27	-18	-12	-9

\* Values shown may differ between productions.



## Hydraulic SAE 10W High Performance Off-Road Hydraulic Oil

### Applications

It is recommended for hydraulic systems of construction machines, heavy duty vehicles and agricultural machinery.

### Performance

API CF/CF-4/SG, Allison C3, CAT TO-2, MIL-L-2104D

### Typical Specifications\*

ISO Viscosity Grade		10W
Density, 15 °C, kg/liter	ASTM D4052	0,880
Flash Point COC, °C	ASTM D92	220
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	39,8
Viscosity, 100 °C, mm <sup>2</sup> /s		6,20
Viscosity Index	ASTM D2270	107
Pour Point, °C	ASTM D97	-30

\* Values shown may differ between productions.



## Türbin ve Sirkülasyon Yağı Series High-Quality Turbine Oil

### Applications

It can be successfully used in gas, vapor and hydraulic turbines, reciprocating air compressors, medium pressure hydraulic systems, vacuum pumps and roller and journal bearings.

### Performance

DIN 51515 (R+0), BS 489

### Typical Specifications\*

ISO Viscosity Grade		32	46	68	100	150	220
Density, 15 °C, kg/liter	ASTM D4052	0,873	0,878	0,883	0,886	0,891	0,895
Flash Point, COC, °C	ASTM D92	216	234	238	250	270	286
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	32	46	68	100	150	220
Viscosity, 100 °C, mm <sup>2</sup> /s		5,40	6,70	8,60	11,10	14,40	18,50
Viscosity Index	ASTM D2270	101	98	97	95	93	93
Pour Point, °C	ASTM D97	-21	-18	-18	-9	-6	-6

\* Values shown may differ between productions.



## Turbine Oil TX Series Ultimate Performance Ash-Free Turbine Oils

### Applications

Intended for a wide range of marine and industrial applications demanding high performance as well as in gas turbines, steam turbines, combined cycle steam and gas turbines, circulation systems, R&O hydraulic systems, R&O gear systems and gear turbines.

### Performance

Siemens TLV 9013 04/05 (approval), ALSTOM HTGD 90 117 (approval), General Electric GEK 32568J and 46506E, ISO 8068:2006(E) L-TSA, L-TGA, DIN 51515 Parts I & II, British Standard 489:1999

### Typical Specifications\*

ISO Viscosity Grade		32	46
Density, 15 °C, kg/liter	ASTM D4052	0,840	0,845
Flash Point, COC, °C	ASTM D92	240	242
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	31,3	43,2
Viscosity, 100 °C, mm <sup>2</sup> /s		5,55	6,72
Viscosity Index	ASTM D2270	119	110
Pour Point, °C	ASTM D97	-30	-30

\* Values shown may differ between productions.



## Trafo Yağı

### Applications

It is used for electrical insulation and cooling in transformers and circuit breakers.

### Performance

IEC 60296 Edition 4.0, Turkish Electrical Authority (TEIAS)

### Typical Specifications\*

Density, 20 °C, kg/liter	ASTM D4052	0,860
Flash Point, COC, °C	ASTM D92	153
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	9,1
Viscosity, -30 °C, mm <sup>2</sup> /s	ISO 3104	720
Water Content, mg/kg	IEC 60814	3
Breakdown Voltage, kV (After Treatment)	IEC 60156	76
DDF at 90 °C	IEC 60247	< 0,001
Pour Point, °C	ASTM D 97	-45

\* Values shown may differ between productions.



## Mortech Oil Series

### High Quality, High Performance Bearing Oil

#### Applications

Suitable for rolling bearings working in low and high rotation rate with single central lubrication system; final units of "No-Twist" rolling machines with dual central lubrication system; low speed initial units and other machine equipments in the same system. For low speed units, higher viscosity Mortech Oils should be used, in accordance with OEM recommendation.

#### Typical Specifications\*

ISO Viscosity Grade		100	150	220	320	460
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	100	150	220	320	460
Viscosity Index	ASTM D2270	92	93	93	92	92
Flash Point COC, °C	ASTM D92	270	270	280	304	320
Pour Point, °C	ASTM D97	-6	-9	-9	-9	-9
TAN, Total Acid Number mgKOH/gr	ASTM D974	0,1	0,1	0,1	0,1	0,1
Copper Strip Corrosion	ASTM D130	1a	1a	1a	1a	1a
Corrosion-Prevention	ASTM D665B	Pass	Pass	Pass	Pass	Pass

\* Values shown may differ between productions.



## Kızak Yağı Series

### Machine Tool Slide Oil

#### Applications

It is used for vertical and horizontal slides of machine tools. It can also be used for hydraulic systems of machine tools, if recommended.

#### Typical Specifications\*

		D 68	G 220
ISO Viscosity Grade		68	220
Density, 15 °C, kg/liter	ASTM D4052	0,880	0,900
Flash Point COC, °C	ASTM D92	230	248
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	68	220
Viscosity, 100 °C, mm <sup>2</sup> /s		8,57	18,50
Viscosity Index	ASTM D2270	96	93
Pour Point, °C	ASTM D97	-18	-9

\* Values shown may differ between productions.



## Rock Drill Lubricant EPXM100

### Rock Drilling Oil

#### Applications

It is used for impact type rock drilling pneumatic equipments like screws, rock drills, pneumatic hammers, piling machines and shaving hammers.

#### Typical Specifications\*

ISO Viscosity Grade		100
Density, 15 °C, kg/liter	ASTM D4052	0,890
Flash Point, COC, °C	ASTM D92	222
Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	107
Viscosity, 100 °C, mm <sup>2</sup> /s		11,80
Viscosity Index	ASTM D2270	98
Pour Point, °C	ASTM D97	-18

\* Values shown may differ between productions.





## Hidrolik Fren Yağı Dot Series Dot-3, Dot-4

### Applications

It is used in the hydraulic brake system of any type of vehicle.

### Performance

FMVSS No.116, SAE J 1703, ISO 4925

### Typical Specifications\*

		DOT-3	DOT-4
Density, 15 °C, kg/liter	ASTM D4052	1,06	1,07
Boiling Point, °C	ASTM D1120	>205	>230
pH Value (According to SAE)	FMVSS 116	7-11,5	7-11,5
Viscosity, 100 °C, mm <sup>2</sup> /s	ASTM D445	1,90	1,80

\* Values shown may differ between productions.



# PREPARATIONS

## Extended Life Coolant SNF Type Extended Life Engine Cooling Liquid

### Applications

Durable coolant formulated with organic additives to help achieve optimal operating temperatures for engines at every climatic condition. Provides excellent anti-rust and anti-corrosion properties for cooling systems of all iron and aluminium alloy engines. No nitrite, amine, phosphate, borate and silicate content in compliance with environmental health regulations.

### Performance

Caterpillar GCM34/0199-99-2091/12, Cummins IS series N14/CES 14603, MB-Approval 325.3, Detroit DFS93K217, Deutz DQC CB-14, Fiat 9,55523, PSA GMW 3420, Ford WSS-M97B44-D, General Electric TA 1000-0200, General Motors B 040 1065, Komatsu 07.892 [2009], Liebherr MD1-36-130, Mazda MEZ MN 121 D, PSA GMW 3420, Renault-Nissan 41-01-001/S Type DRolls Royce Power Systems AG MTL 5048/AG 2.13.01, Tata Motors&Jaguar CMR 8229/STJLR 651.5003, Volvo AB 014 GS 17009/41-01-001/S Type D, VW TL-774 D = G 12, VW TL-774 F = G 12+, VW 324 Typ SNF/61-0-0257/D36 5600, Wärtsilä DLP799861/32-9011, ASTM D3306/D4656/D4985/D6210

### Typical Specifications\*

Nitrite, Amine, Phosphate, Borate, Silicate		N/A
Colour		Light Pink
Density, 15 °C, kg/liter	ASTM D1122	1,116
Freezing Point, °C, (%33 Antifreeze)		-20
Freezing Point, °C, (%50 Antifreeze)	ASTM D1177	-37
Boiling Point, °C	ASTM D1120	166
pH in water, %33 vol.	ASTM D1287	8,31
Reserve Alkalinity (pH 5.5)	ASTM D1121	5,2

\* Values shown may differ between productions.



## Süper Antifriz Engine Coolant

### Applications

It is used in aluminum or other type radiators. It is recommended both in winter/summer, since it prevents freezing/boiling of the coolant.

### Performance

ASTM D-3306/D-4985, BS 6580, SAE J 1034, TS 3582

### Typical Specifications\*

Density, 15 °C, kg/liter	ASTM D4052	1,126
Freezing Point, °C, (%100 Antifreeze)	ASTM D1177	-18
Freezing Point, °C, (%50 Antifreeze)		-38
Boiling Point, °C, (%100)	ASTM D1120	164
Boiling Point, °C, (%50)		108
pH, 20 °C, (%100)	ASTM D1287	8,15
pH, 20 °C, (%50)		9,08

\* Values shown may differ between productions.



## Yazlık Cam Suyu Windshield Cleaning Liquid

### Applications

Can be used on all cars to wash off the dirt deposited on the windows.

### Typical Specifications\*

Density, 15 °C, kg/liter	ASTM D4052	0,998
pH, 20 °C 100%	ASTM D1287	7,4

\* Values shown may differ between productions.



## Cam Suyu Antifrizi (-18 °C) Windshield Washer Fluid Antifreeze

### Applications

It is used in all kind of vehicles during all four seasons.

### Typical Specifications\*

Density, 15 °C, kg/liter	ASTM D4052	0,960
Freezing Point, °C	ASTM D1177	-18
pH, 20 °C %100	ASTM D1287	8,3

\* Values shown may differ between productions.



## Motor Oil Economizer Motor Oil Additive

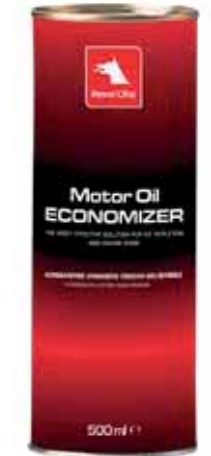
### Applications

It is added into the engine oil while the engine is idling. This operation should be repeated at each engine oil replacement. It readily mixes with all kind of engine oils. It is not recommended for engine using Petrol Ofisi multigrade oils.

### Typical Specifications\*

Viscosity, 100 °C, mm <sup>2</sup> /s	ASTM D445	142,10
Pour Point, °C	ASTM D97	-18

\* Values shown may differ between productions.





## Ready Extended Life Coolant -40 °C Engine Coolant

### Applications

Suitable for high performance gasoline and diesel engine passenger cars, SUV, off-road vehicles and pick-ups.

### Performance

Cummins CES 14603, Detroit Diesel Powercool Plus, Deutz DQC CB-14, MAN 324 Type SNF, VW TL 774-F

### Typical Specifications\*

Nitrite, Amine, Phosphate, Borate, Silicate		N/A
Color		Light Pink
Density, 15 °C kg/liter	ASTM D1122	1,116
Freezing Point, °C	ASTM D1177	-40
Slip Point, °C	ASTM D1120	166
pH, %33	ASTM D1287	8,31
Reserved Alkalinity (ph 5.5)	ASTM D1121	5,2

\* Values shown may differ between productions.



## Hazır Antifriz -40 °C Ready to Use Engine Coolant

### Applications

It is used in summer and winter as it prevents freezing of the radiator water in cold weather and boiling in hot weather in aluminum and other types of radiators. It is ready to use, there is no need to add water.

### Performance

SAE J 1034, ASTM D-3306, ASTM D-4985, BS 6580, TS 3582

### Typical Specifications\*

Color		Light Green
Density, 15 °C kg/liter	ASTM D1122	1,070
Freezing Point, °C	ASTM D1177	-40
Slip Point, °C	ASTM D1120	109
pH, %33	ASTM D1287	9,15
Reserved Alkalinity (ph 5.5)	ASTM D1121	9,9

\* Values shown may differ between productions.



Petrol Ofisi

Yazlık  
**CAM  
SUYU**  
WINDSHIELD  
CLEANER





# ADBLUE®

## ADBLUE®

### Applications

AdBlue® is bound to use in diesel vehicles equipped with SCR to adapt the vehicle Euro IV, V and VI emission standards. It is carried onboard SCR-equipped vehicles in specially and separately designed tanks. It is necessary to avoid adding fuel into AdBlue® tank. SCR is the technology designed on refining the exhaust gases by injection of AdBlue® directly on to emission channel. This system reduces levels of NOX using ammonia as a reductant within a catalyst system. AdBlue®, as the reducing agent, reacts with NOX to convert the pollutants into nitrogen, water and tiny amounts of carbon dioxide (CO<sub>2</sub>) - natural elements common to the air we breathe everyday.

### Performance

ISO 22241-1/2/3, DIN 70070

### Typical Specifications\*

Urea Content Unit % (m/m)	ISO 22241-2	31,8-33,2
Density, 20 °C kg/liter	ISO 12185	1,090
Refractive Index	ISO 22241-2	1,3814-1,3843
Alkalinity as NH <sub>3</sub> % (m/m)	-	≤0,2
Biuret % (m/m)	ISO 22241-2	≤0,3
Aldehydes mg / kg	ISO 22241-2	≤5
Insolubles mg / kg	ISO 22241-2	≤20

\* AdBlue® is a registered trademark of the VDA (Verband der Automobilindustrie).

\* Petrol Ofisi A.Ş. is a licensed member of VDA.

\* Values shown may differ between productions.



# GREASES



## Ultra Tech CSI 146 Industrial Calcium Sulfonate Complex Grease

### Applications

It is recommended to be used in heavy industry such as iron-steel, cement, pulp and paper, mining, and low-RPM applications such as continuous casting line (CCM), ladle turrets, roller bearings, press and rolls and off-road equipment where the equipment operates under excessive load and temperature, and water cooling is performed.

### Performance

DIN 51502: KPF 1,5 R-20, TS 11584

### Typical Specifications\*

Thickener Type		Calcium Sulfonate Complex
NLGI		1,5
Color		Black
Base Oil Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	400
Timken OK, lb	ASTM D2509	65
Dropping Point, °C	ASTM D566	280
Welding Load, kg	ASTM D2596	800
Rust Test	ASTM D1743	Pass
Oil Separation, % weight	IP-121	1
4 Ball Wear, 40 kg, 60 min.	IP-239	0.5
Water Resistance, % weight	ASTM D1264	5
Water Spray, % weight	ASTM D4049	30
Operating Temperature, °C max.		180**



\* Values shown may differ between productions. \*\* Operating temperature can go up to 230 °C with a continuous supply of grease.

## Ultra Gres CS Series Calcium Sulfonate Complex Grease

### Applications

It is recommended to use in heavy loaded and water saturated operations in paper and steelwork applications. Other suitable applications are listed below.

- Continuous casting lines
- Heavy industrial applications working under extreme pressure and temperature even with water presence
- Pot turret bearings
- Paper mills
- Rolling mill bearings

### Performance

DIN 51825: KP1 (1,5) R-20 (Ultra Gres CS 146), DIN 51825: KP1 R-20 (Ultra Gres CS-2), TS 11584

### Typical Specifications\*

		Ultra Gres CS 146	Ultra Gres CS 2
Thickener Type		Calcium Sulfonate Complex	Calcium Sulfonate Complex
NLGI		1.5	2
Colour		Brown	Brown
Basel Oil Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	460	460
Timken OK, lb	ASTM D2509	60	60
Dropping Point, °C	ASTM D566	300	300
Welding Load, kg	ASTM D2596	620	620
Rust Test	ASTM D1743	Pass	Pass



\* Values shown may differ between productions.

## Hi-Thermo 850

### High Temperature and Extreme Pressure Grease

#### Applications

It is recommended for lubrication of journal and ball bearings used in iron and steel industry, cooling units and rotary steam couplings of kilns in cement industry, ball bearings and chain drives of oven conveyors, journal and ball bearings of heavy duty construction equipments. It is recommended for lubrications of ball bearings at elevated temperatures between 175 °C and 210 °C. Please contact to our technical expert for applications above 195 °C.

#### Performance

DIN 51825: KP1(1,5) R-20, TS 11584

#### Typical Specifications\*

Thickener Type		Bentonit
NLGI		1
Colour		Yellow
Base Oil Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	550
Timken OK, lb	ASTM D2509	60
Dropping Point, °C	ASTM D566	N/A
Welding Load, kg	ASTM D2596	400
Rust Test	ASTM D1743	Pass

\* Values shown may differ between productions.



## Mega Gres WR 2

### Lithium/Calcium Thickener High Performance Grease

#### Applications

It is used in medium and high speed operations where excessive impact loads are present. It is recommended for wide range of industrial and automotive applications. Especially for roller bearings used in steel industry, working in the presence of water and moisture. It is suitable for operations between -20 to 130 °C.

#### Performance

DIN 51825: KP 2 K-20, TS 11584

#### Typical Specifications\*

Thickener Type		Lithium/Calcium
NLGI		2
Colour		Yellow
Base Oil Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	220
Timken OK, lb	ASTM D2509	50
Dropping Point, °C	ASTM D566	180
Welding Load, kg	ASTM D2596	200
Rust Test	ASTM D1743	Pass

\* Values shown may differ between productions.



## Carius EP Series

### High Temperature and Extreme Pressure Grease

#### Applications

Carius EP 146 is recommended for lubrication of low speed roll bearings used in iron, continuous casting line output units operating between 150 °C and 190 °C. It can be used in central lubrication applications. Base oil viscosity is ISO VG 460, NLGI is 1,5. Carius EP 220 is recommended for lubrication of middle speed roll bearings used under heavy and shock loads in a water intense environment. It can be used in a wide range applications such as iron-steel, cement and automotive industries. Base oil viscosity is ISO VG 220, NLGI is 2. Carius EP 320 is recommended especially in mining industry. Due to its Molybdenum Disulfide additive, it prevents metal-metal friction in case of vibration. Base oil viscosity is ISO VG 320, NLGI is 2. It can be used up to 175 °C.

#### Performance

DIN 51825-KP 1 (1,5) P-20 (Carius EP 146), DIN 51825-KP 2 P-20 (Carius EP 220) DIN 51825- KPF 2 P-20 (Carius EP 320)

#### Typical Specifications\*

		Carius EP 146	Carius EP 220	Carius EP 320
Thickener Type		Lithium Complex	Lithium Complex	Lithium Complex
NLGI		1,5	2	2
Colour		Blue	Blue	Black
Base Oil Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	320	220	220
Timken OK, lb	ASTM D2509	60	60	60
Dropping Point, °C	ASTM D566	240	240	240
Welding Load, kg	ASTM D2596	400	400	500
Rust Test	ASTM D1743	Pass	Pass	Pass

\* Values shown may differ between productions.



## Süper Gres EP Series

### Lithium Thickener High Performance Grease

#### Applications

It is used for the lubrication of impact loaded heavy duty bearing. NLGI 0 is used for high-speed applications with capillary tubes in the presence of the water, or in the winter, whereas type 1 and 2 are used during summer. Type 2 is recommended for especially wide roller bearings located at the dry and wet ends of paper machines. It is suitable for operation between -12 °C and 130 °C.

#### Performance

DIN 51825: KP 0 K-20 (Süper Gres EP 0), DIN 51825-GP 00 G-30 (Süper Gres EP 00), DIN 51825: KP 1 K-20 (Süper Gres EP 1), DIN 51825: KP 2 K-20 (Süper Gres EP 2), DIN 51825: KP 3 K-20 (Süper Gres EP 3)

#### Typical Specifications\*

		Süper Gres EP 0	Süper Gres EP 00	Süper Gres EP 1	Süper Gres EP 2	Süper Gres EP 3
Thickener Type		Lityum	Lityum	Lityum	Lityum	Lityum
Colour		Sarı	Sarı	Sarı	Sarı	Sarı
NLGI		0	00	1	2	3
Base Oil Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	100	220	220	220	220
Timken OK, lb	ASTM D2509	50	50	50	60	60
Dropping Point, °C	ASTM D566	175	165	185	185	185
Welding Load, kg	ASTM D2596	250	250	250	250	250
Rust Test	ASTM D1743	Pass	Pass	Pass	Pass	Pass

\* Values shown may differ between productions.





## Molibdenli Gres 2

### Lithium Thickener Industrial Grease

#### Applications

It is used for chassis lubrication, joint connections, universal joints, wheel bearings, front wheel mechanisms, bushing and ball joint pins. In addition, it is very suitable for numerous industrial applications where grease with molybdenum additive is required like sliding surfaces, ball bearings, cams, railway journal and chain drives. It is suitable for temperatures between -20 °C and 140 °C.

#### Performance

DIN 51825-KPF 2 K-20

#### Typical Specifications\*

Thickener Type		Lithium
NLGI		2
Colour		Black
Base Oil Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	220
Timken OK, lb	ASTM D2509	50
Dropping Point, °C	ASTM D566	185
Welding Load, kg	ASTM D2596	400
Rust Test	ASTM D1743	Pass

\* Values shown may differ between productions.



## Süper Gres MP-2

### Lithium Thickener Automotive Grease

#### Applications

It is used for chassis lubrication requiring grease and medium speed rolling bearings carrying light and medium loads in automotive industry. Recommended for wheel hub of heavy duty vehicles and construction equipment. Suitable for use at temperature between -20 °C and 140 °C.

#### Performance

DIN 51825: K 2 K-20

#### Typical Specifications\*

Thickener Type		Lithium
NLGI		2
Colour		Yellow
Base Oil Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	150
Timken OK, lb	ASTM D2509	50
Dropping Point, °C	ASTM D566	180
Welding Load, kg	ASTM D2596	315
Rust Test	ASTM D1743	Pass

\* Values shown may differ between productions.



## Süper Gres Series

### High Performance Automotive Grease

#### Applications

It is used for lubrication of journal and rolling bearings, all kind of sliding surfaces and greasing points of automotive vehicles, if necessary. It is recommended for bearings of electric motors.

#### Performance

DIN 51825: K 2 K-20 (Süper Gres 2), DIN 51825: K 3 K-20 (Süper Gres 3)

#### Typical Specifications\*

		Süper Gres 2	Süper Gres 3
Thickener Type		Lithium	Lithium
Colour		Yellow	Yellow
NLGI		2	3
Base Oil Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	100	100
Timken OK, lb	ASTM D2509	50	50
Dropping Point, °C	ASTM D566	185	185
Welding Load, kg	ASTM D2596	250	250
Rust Test	ASTM D1743	Pass	Pass

\* Values shown may differ between productions.



## Kauçuklu Gres Series

### Calcium Thickener Automotive Grease

#### Applications

It is developed for journal and ball bearings operating under light-medium loads with medium and high speed.

#### Performance

DIN 51825-KP 2 E-10 (Kauçuklu Gres), DIN 51825-KP 3 E-10 (Kauçuklu Gres 3)

#### Typical Specifications\*

		Kauçuklu Gres	Kauçuklu Gres 3
Thickener Type		Calcium	Calcium
NLGI		2	3
Colour		Green	Green
Base Oil Viscosity, 40 °C, mm <sup>2</sup> /s	ASTM D445	1000	1000
Timken OK, lb	ASTM D2509	40	40
Dropping Point, °C	ASTM D566	>95	>95
Welding Load, kg	ASTM D2596	100	100
Rust Test	ASTM D1743	Pass	Pass

\* Values shown may differ between productions.





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