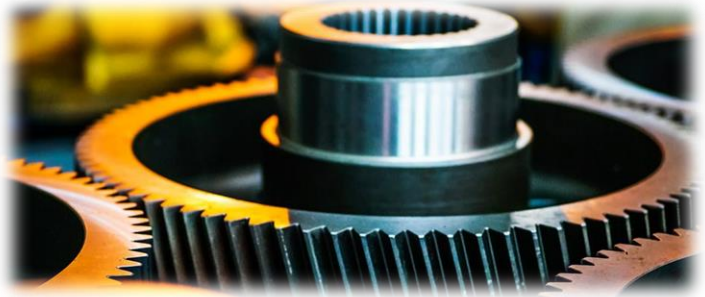
PETRO 1

We’re the Creators,
What do you want…?!

Industrial Lubricants





www.petro1co.com
info@petro1co.com

We're the Creators,
What do you want…?!

PETRO1® group has more than 20 years' experience in manufacturing finished lubricants Formulated with unique base oils with exclusive **Biesnate™** technology.

From motor oil for the family car to lubricants for heavy industrial equipment, customers across five continents trust **PETRO1®** Lubricants to deliver excellent, reliable performance in a wide range of operating conditions.

PETRO1® engine oil & industrial lubricants are produced by the **PETRO1®** Group plant site which is a modern high-tech manufacturing complex with a yearly capacity of approximately **30000 tons** of high-tech lubricants.

Our complete line of lubricants and coolants is sold worldwide under our **PETRO1®** brand.

These premium products help improve fuel economy, lower emissions and extend the period between oil changes.

Base oil is the oil used in lubricant formulas before additives are introduced. Premium base oil is manufactured using a process called **Biesnate ™** , which **PETRO1®** commercialized in 2018.

In this technology, biodegradable raw materials and Nano compounds have been used to produce a new generation of engine and industrial oils, which has significantly increased the quality and efficiency of the above products compared to the products of other competitors.

PETRO1® has been innovating and reinventing superior quality solutions to cater to the ever-changing needs across industries. Its extensive R&D set-up in factory comprises of a fully equipped laboratory where it upgrades its existing solutions and develops new products.

PETRAULIC (Hydraulic Oil)

We're the Creators,
What do you want…?!

Description & Applications:

PETRAULIC which has flash points above 250 °C is anti-wear hydraulic fluid with difficult to producing sludge. Because it is blended with friction modifier additives, it provides much better energy-saving performance than conventional mineral-oil-based hydraulic fluids. **PETRAULIC** has outstanding longer fluid life because it is blended with highly exclusive **Biesnate™** base oil and new ashless additives in order to prevent sludge formation. **PETRAULIC** also has good anti-seizure performance for withstanding shock loads in addition to its excellent anti-wear performance, and is suitable for all types of hydraulic pumps and motors with the operating condition in a wide range of low- to high-pressure. **PETRAULIC** can be used in a wide range of low- to high-pressure hydraulic machineries including forging presses, metalworking machines, injection molding machines, extruders, machine tools, construction machinery, marine deck equipment, cargo handling machinery, mining machinery and many others.

Benefits & Advantages:

1. Guaranteed Flash Points above 250 °C.
2. Excellent Energy-Saving Performance. **PETRAULIC** is blended with friction modifiers that provide excellent friction characteristics and reduce the friction resistance in hydraulic pumps, valves, and actuators. As a result, hydraulic systems that use **PETRAULIC** can consume less electricity than systems that use conventional hydraulic fluids.
3. Outstanding Oxidative and Thermal Stability Because **PETRAULIC** is blended with highly exclusive **BIESNATE ™** base oil and new types of ashless additives, it produces extremely little sludge, so it can be used for longer periods even at high temperatures and high pressures.
4. It prevents wear and boosts performances in today's high-pressure and high-performance hydraulic pumps and valves.
5. High Viscosity Index and Low Pour Point **PETRAULIC** has a high viscosity index, so its temperature-related viscosity change is low. As a result, it provides smooth operation across a wide range of temperatures.
6. Excellent Shear Stability. **PETRAULIC** possesses excellent shear stability, so it undergoes almost no drop in viscosity even when used for long periods of time.

PETRAULIC (Hydraulic Oil)

We're the Creators,
What do you want...?!

Performance Levels :

DIN 51524 Part 3 HVLP; ISO 6743-4 (ISO-L-HV); Parker (Denison) HF-0, HF-2; AFNOR NFE 48-603 HV; Vickers M-2950-S, I-286-S; Case IH Poclain

Product Name	Density @ 15^{0c}	Viscosity @ 40^{0c}cSt	Viscosity @ 100^{0c}cSt	Viscosity Index	Flash Point ^{0}C	Pour Point ^{0}C
PETRAULIC - 32	850 Kg/m^3	31.3	5.7	156	280	- 33
PETRAULIC - 46	860 Kg/m^3	45.4	7.8	158	280	- 44
PETRAULIC - 68	860 Kg/m^3	66.2	8.7	162	285	- 47
PETRAULIC - 100	880 Kg/m^3	95	10.9	162	290	- 41
PETRAULIC - 150	890 Kg/m^3	149	14.6	170	320	- 37

CIRCUL 1 (Circulating Oil)

Description & Applications:

The **CIRCUL 1** is premium performance circulating lubricants designed for applications including steam and hydro turbine sets and other systems where long lubricant service life is required. This lubricant formulated from exclusive **Biesnate ™** base stocks and an additive system which provide an extremely high level of chemical and thermal stability, rapid and complete separation from water and a high resistance to emulsification. They provide excellent protection against rust and corrosion, including resistance to salt water, and good anti wear properties. They have a high viscosity index which ensures minimum variation of film thickness with temperature and minimum power loss during the warm up period. These grades have excellent air release properties which allow entrained air to separate, thus avoiding pump cavitations and erratic operation. **CIRCUL 1** Named is the lubricants of choice for many users because of their reputation for long life, excellent equipment protection and outstanding versatility in the wide variety of industrial applications. DTE Oil Named lubricants are used widely in steam turbines and hydro turbines with splash, bath and ring-oiling arrangements, and all other continuous circulation methods involving pumps, valves and ancillary equipment. This product series is recommended for continuous service in the lubrication of plain and rolling bearings and parallel shaft gearing. They have also been used successfully in rotary air compressor applications and reciprocating natural gas compressors as well as vacuum pumps. Their reputation is based on many decades of successful service and satisfied users. **CIRCUL 1** is well known and highly regarded worldwide based on their outstanding performance and the R & D expertise and the global technical support which stand behind the brand. The highly versatile performance of **CIRCUL 1** oil has made them the oil of choice for a multitude of industrial equipment applications around the world. **CIRCUL 1** oil enjoy an excellent reputation in the lubrication of the circulation systems of steam turbines and hydro turbines, including geared turbines, plus a wide variety of ancillary equipment. As designs change and increase in severity, it is the challenge of our formulation scientists to understand the effect of these changes on the lubricant and to formulate these products for the broad versatility they are recognized for. For the **CIRCUL 1** of lubricants, this process has resulted in the use of special base stocks for outstanding oxidation stability, plus a unique additive combination to ensure the excellent, wide-ranging performance of these oils. A review of the features, advantages and potential benefits of the product are shown below.

PETRO 1

We're the Creators,
What do you want…?!

CIRCUL 1 (Circulating Oil)

Benefits & Advantages:

1. oil charge life in circulation systems and reduced oil replacement costs.
2. Improved operating efficiency.
3. Longer equipment life, reduced maintenance and downtime.
4. Longer equipment life, reduced maintenance and downtime.
5. Avoids pump cavitations, noisy and erratic operation.
6. Rationalize inventory, reduced inventory costs.

Performance Levels :

DIN 51515-1:2010-02 , GE Power GEK120498, JIS K-2213 Type 2

PETRO 1

We're the Creators,
What do you want…?!

CIRCUL 1 (Circulating Oil)

Product Name	Density @ 15^{0c}	Viscosity @ 40^{0c}cSt	Viscosity @ 100^{0c}cSt	Viscosity Index	Flash Point ^{0}C	Pour Point ^{0}C
CIRCUL 1 - 32	850 Kg/m^3	31	5.5	144	280	- 30
CIRCUL 1 - 46	860 Kg/m^3	45	7.5	148	280	- 44
CIRCUL 1 - 68	860 Kg/m^3	66.1	8.7	140	285	- 47
CIRCUL 1 - 100	880 Kg/m^3	95	10.9	144	290	- 41
CIRCUL 1 – 150	890 Kg/m^3	145	14.2	140	320	- 37
CIRCUL 1 - 220	890 Kg/m^3	220	18.8	140	310	- 40
CIRCUL 1 – 320	890 Kg/m^3	320	25.1	150	295	- 40
CIRCUL 1 – 460	900 Kg/m^3	453	29.2	160	300	- 36
CIRCUL 1 - 680	920 Kg/m^3	677	36.9	167	310	- 37

PETRO 1

We're the Creators,
What do you want...?!

PETROGEAR (Industrial Gear Oil)

We're the Creators,
What do you want…?!

Description & Applications:

PETROGEAR oils are high performance, mild EP, industrial gear lubricant formulated with a sulfur phosphorus additive system, which also provides rust and oxidation inhibition, a corrosion and oxidation inhibitor and a metal passivator. **PETROGEAR** is specifically designed primarily for industrial gear lubrication services where loads and shock loadings are high. Other applications are : Enclosed industrial gear drives , Open gear drives (heavy grades) , Spur, bevel, helical, worm and industrial hypoid gear cases , Industrial type reduction gearboxes on mining equipment, cement mills, ball and rolling mills, crushers, conveyors, kilns, winches, machine tools and marine equipment , Chain drives, sprockets, slide guides and flexible couplings , Plain and rolling element bearings , For bath, splash, circulation or spray lubrication, as applicable to the grade

Benefits & Advantages:

1. **Maintains gear set efficiencies**. High thermal stability EP system maintains clean gear and bearing surfaces, minimizing deposits which interfere with effective lubrication. High oxidation stability limits in-service viscosity increases, which lead to energy losses.
2. **Protects metal surfaces.** Extremely effective EP system forms a protective film in areas of metal-to-metal contact, minimizing wear rates and maintaining efficient transfer of power. Good water separation and effective rust inhibitors protect surfaces against rust and corrosion. High thermal stability additive system reduces the formation of high temperature compounds which can be corrosive to bearing materials. The effective corrosion inhibitor provides additional protection for metal components.
3. **Effective oxidation stability**. Effective oxidation inhibitors and copper passivator minimize oil oxidation, limiting viscosity increase and can extend oil drain intervals.

Performance Levels :

ANSI/AGMA 9005-E02 EP ,AIST 224 , David Brown, Table E, , DIN 51517 Part 3 CLP

PETROGEAR (Industrial Gear Oil)

Product Name	Density @ 15^{0c}	Viscosity @ 40^{0c}cSt	Viscosity @ 100^{0c}cSt	Viscosity Index	Flash Point ^{0}C	Pour Point ^{0}C
PETROGEAR - 68	860 Kg/m^3	67.6	8.5	140	285	- 47
PETROGEAR - 100	880 Kg/m^3	98	10.9	144	290	- 41
PETROGEAR - 150	890 Kg/m^3	145	14.2	140	320	- 37
PETROGEAR - 220	890 Kg/m^3	220	18.8	140	310	- 40
PETROGEAR - 320	890 Kg/m^3	320	25.1	150	295	- 40
PETROGEAR - 460	900 Kg/m^3	453	29.2	160	300	- 36
PETROGEAR - 680	920 Kg/m^3	677	36.9	167	310	- 37
PETROGEAR - 1000	920 Kg/m^3	1000	50	167	310	- 37

PETRO 1

We're the Creators,
What do you want...?!

PETRO HT1 (Heat Transfer Oil)

Description & Applications:

PETRO HT1 heat Transfer oils for use in secondary or indirect heating systems. They are formulated with exclusive **Biesnate™** base oil technology. **PETRO HT1** Heat Transfer Oils are noncorrosive, low odor level, excellent seal compatibility fluids that can absorb heat quickly and transport it to the material or fluid requiring heat. Their excellent thermal and oxidation stability promotes long service life and clean heat exchanger systems. There are many uses of heat in processing materials. There are also many ways of transferring heat to the material or fluid that needs to be heated. **PETRO HT1** Heat Transfer Oils are excellent for this purpose and offer many advantages. They can be used at low pressures. In most applications, the equipment required to apply the oils is relatively inexpensive. The application equipment can also be portable and, therefore, used where it is needed.

Benefits & Advantages:

1. Excellent thermal efficiency and stability — Helps ensure long oil life through outstanding thermal and oxidation stability which helps prevent sludging or deposit formation inside piping.
2. Good rust and corrosion protection — Help prevent rusting or corrosive problems in circulating oil system.
3. Excellent performance at temperature extremes — Outstanding thermal stability helps assure minimal thermal cracking at high temperatures or in repeated cycling from low to high temperatures.
4. Ease of pumping and circulation — Excellent stability helps assure minimal oxidation and helps prevent sludging or deposit formation inside piping.
5. Minimized makeup oil — Low vapor pressure combined with low volatility and high flash point means minimum evaporative loss.

Performance Levels :

DIN 51502 class L , KS M 2501 , ISO 6743/12 class L family QB

PETRO HT1 (Heat Transfer Oil)

PETRO 1

We're the Creators,
What do you want...?!

Product Name	Density @ 15^{0c}	Viscosity @ 40^{0c}cSt	Viscosity @ 100^{0c}cSt	Viscosity Index	Flash Point ^{0}C	Pour Point ^{0}C
Petro HT1 - 32	850 Kg/m^3	32	5.8	132	240	- 21
Petro HT1 - 46	860 Kg/m^3	46	7.5	128	240	- 18
Petro HT1 - 68	860 Kg/m^3	68	9.1	120	265	- 9

PETROSSOR (Compressor Oil)

We're the Creators,
What do you want…?!

Description & Applications:

PETROSSOR Compressor Oils are formulated with exclusive **Biesnate™** base oil and ashless additives to provide long oil life. They are designed for use in rotary and reciprocating air compressors and vacuum pumps where the viscosity, technical properties and product design are appropriate. **PETROSSOR** Compressor Oils have excellent high temperature thermal stability and are resistant to varnish and hard carbon formation. These oils are not recommended for breathing air or refrigeration compressors. Oil life is dependent on operating conditions and maintenance practices – a regular oil analysis program is recommended.

Benefits & Advantages:

1. Excellent resistance to varnish and carbon helps extend valve life and reduce maintenance.
2. Formulated with ashless additives to help reduce deposits.
3. Strong ability to separate from water to protect against rust and corrosion.
4. Excellent anti-foam properties provide improved film strength and heat control.
5. Long oil life reduces maintenance costs.
6. Anti-wear fortified and designed to control foam for improved film strength and wear protection.
7. Readily separates from water for easy removal.

Performance Levels :

DIN 51506 VDL , ISO-L-DAB , ISO-L-DAG

PETROSSOR (Compressor Oil)

We're the Creators,
What do you want...?!

Product Name	Density @ 15^{0c}	Viscosity @ 40^{0c}cSt	Viscosity @ 100^{0c}cSt	Viscosity Index	Flash Point ^{0}C	Pour Point ^{0}C
Petrossor- 32	850 Kg/m^3	32	5.8	152	240	- 51
Petrossor- 46	860 Kg/m^3	46	7.5	152	240	- 51
Petrossor - 68	860 Kg/m^3	68	9.1	140	265	- 53
Petrossor - 100	880 Kg/m^3	98.5	12.9	160	290	- 47
Petrossor – 150	890 Kg/m^3	149	18.2	158	395	- 47

PETROBINE (Turbine Oil)

Description & Applications:

PETROBINE are high-quality lubricating oils for use in steam, water or gas turbines. They are formulated from high VI and exclusive **Biesnate ™** base stocks and contain special additives to give them anti-corrosion, antioxidant and antifoam properties.
PETROBINE also suitable for the lubrication of marine steam turbines and reduction gears, turbo blowers, compressors, steam engines, crank chambers and hydraulic machinery.

Benefits & Advantages:

1. Small Viscosity Change. **PETROBINE** has high viscosity index, which means small viscosity change for the temperature variation, and indicates good lubricity.
2. Good Oxidation Stability. **PETROBINE** is highly refined to remove impurities and acidic compounds. It has good oxidation and thermal stability.
3. Excellent Water Separation Property. **PETROBINE** has good emulsion resistance property and separates water easily when water is contaminated.

Performance Levels :

ASTM D 4304 Type I & III , ALSTOM HTGD 90017, BS 489, DIN 51515 PART I/II, DIN 51524 PART I, GE GEK-32568F ISO 8068 TGB/TGSB, ISO 8068 TSA/TGA, ISO 11158 HH/HL, SIEMENS AG TLV 9013 04 & 05 STD Thermal Stability

PETRO 1

We're the Creators,
What do you want…?!

PETROBINE (Turbine Oil)

Product Name	Density @ 15^{0c}	Viscosity @ 40^{0c}cSt	Viscosity @ 100^{0c}cSt	Viscosity Index	Flash Point ^{0}C	Pour Point ^{0}C
Petrobine- 32	850 Kg/m^3	32	5.5	132	240	37-
Petrobine- 46	860 Kg/m^3	46	6.8	148	250	44-
Petrobine - 56	860 Kg/m^3	56	7.8	144	270	42-
Petrobine - 68	880 Kg/m^3	67.1	8.7	140	275	45-
Petrobine - 100	890 Kg/m^3	99.3	10.9	144	280	41-
Petrobine - 150	890 Kg/m^3	149	14.2	140	285	39-
Petrobine - 220	890 Kg/m^3	220	18.8	140	290	33-

PETRO 1

We're the Creators,
What do you want...?!

PETROMER (Transformer Oil)

We're the Creators,
What do you want…?!

Description & Applications:

PETROMER Transformer Oil is manufactured using special **Biesnate ™** base oils which possess inherently high dielectric strength. It is manufactured under strict conditions to conform to IEC 60296 Edition 4.0 and BS 148 Class I & II requirements. **PETROMER** Transformer Oil is recommended for oil filled power and distribution transformers, rectifiers, circuit breakers and switchgears where an uninhibited transformed oil or dielectric fluid is specified. It will dissipate heat, insulate windings and quench the spark between the opening contacts when tap changing.

Benefits & Advantages:

1. Excellent oxidation stability.
2. Excellent low temperature performance.
3. Excellent cooling properties.
4. High dielectric strength for electrical insulation.

Performance Levels :

IEC 60296 Edition 4.0, IEC 62535, DIN 51353, ASTM D1275 Method B, BS 148 Class I & II, AS 1767-1975, ASTM D3487 Type

PETROMER (Transformer Oil)

We're the Creators,
What do you want...?!

Product Name	Density @ 20^{0c} Kg/m^3	Viscosity @ 40^{0c}cSt	Viscosity @ 100^{0c}cSt	Breakdown voltage (kV)	Flash Point ^0C	Polycyclic aromatic content (% weight)	Pour Point ^0C
PETROMER	877	9.5	1192	60 - 40	150	<3	- 57

www.petro1co.com

We’re the Creators,
What do you want…?!