



# ***Petrovöll***<sup>®</sup> **MOTORENÖL**





**PERFORMANCE ENGINEERED**

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## Message from the CEO

"If you want something done right, you have to do it yourself."  
This is the age-old adage that inspired the founding of Petrovöll GmbH.

After years of owning and managing multinational businesses responsible for constructing entire cities all over the world, we discovered that the industrial lubricants available in the market just could not meet all the varying standards and needs of our equipment, which sometimes have to work under the harshest of conditions.

So we decided to make them ourselves.

Petrovöll is an innovative line of lubricants designed, after years of intensive research and testing, to work for any type of machinery under any kind of condition. And because we know first-hand the importance of delivering products that meet the most rigorous industry standards, we employ only the most advanced technology and tools available in the market.

Our unique understanding of real-time industry requirements have also led us to take steps in ensuring that our clients get the option to order and receive custom products with modified formulas so that they get the exact specifications they need for whatever working or climate conditions they operate in.

So if you want your lubricant products done right, all you have to do is let us do it for you. Because here at Petrovöll, we set high standards to deliver high performance.

Engr. Hani T. Saliba  
Chief Executive Officer

## About PETROVÖLL GmbH

Petrovöll is a fast growing premium lubricant brand with offices and R&D sites located in Essen, Germany, and a 50,000sq ft. state-of-the-art blending facility.

Our products are all made utilizing European standards and are offered at highly competitive rates to our customers and partners worldwide. The full range of our product line includes motor oils for cars, trucks & two wheelers, hydraulic oils, gear oils and industrial oils. We also cater to clients with custom orders for products such as specialty oils, antifreeze/coolant, brake fluids and all kinds of greases.

Our state-of-the-art manufacturing facility is fully equipped with the best and latest tools, machinery, laboratory and technology, enabling us to deliver lubricants with the highest quality, optimum performance and efficiency. Moreover, we go the extra mile to meticulously abide by the latest environmental guidelines and practice the most effective operational health and safety protocols, in compliance to international regulations and standards.

Our company's philosophy of growth stems from our uncompromising focus on quality and our resolve to continuously meet the growing expectations of our customers. As such, all our operations and practices are patterned after a customer-centric approach based on core values such as quality, reliability, innovation, and performance. This include regularly updating our Quality Management Systems and continuously keeping our teams abreast of the latest requirements from OEMs and car manufacturers.

## Our CERTIFICATIONS

Petrovöll has successfully completed the certification process of both API and SAE soon after being awarded with the ISO 9001 : 2015, ISO 14001:2015 and OHSAS 18001:2007 accreditations. The decisive criterion for this certification was our business process-integrated quality management system which organizes the workflows and interfaces to customers, suppliers and other business partners.



Strategic control tools introduced for the individual workflows enhance the effectiveness and quality of the business processes throughout the company, and focuses on the prevention of non-conformities. Furthermore, the company's front liners conduct regular customer interviews to help identify actual and perceived weak points and ensure that these issues are addressed and eliminated straight away.

The Petrovöll team is particularly proud of the company's well-earned certifications and its globally recognized TS (Technical Specification), effectively consolidates the requirements of numerous international automotive manufacturers. Through our OEM certifications with vehicle & engine manufacturers like Caterpillar, BMW, Volvo, Renault, MAN, D. Chrysler, VW and Mercedes, we aim to further boost our competitiveness while strengthening employee motivation and securing jobs.



## KRÄFT SYNTHETIC MOTOR ENGINE OIL

**PETROVÖLL KRÄFT SYNTHETIC MOTOR ENGINE OIL**, is a new automotive oil specifications being developed by using advanced formulation to represent the next iteration of improved oil specifications designed to meet the demands of modern engine technology. The new technology can prevent the occurrence of LSPI and minimize timing chain elongation, with performance improvements in various categories including oxidation stability and sludge control. It provides enhanced, all-round protection for the most critical parts of the engine.

**PETROVÖLL KRÄFT SYNTHETIC MOTOR ENGINE OIL**, it is ultra-modern fuel-efficient oils with reduced HTHS viscosity. It is formulated from Synthetic base-stocks fortified with a precisely balanced selective additive gives unsurpassed levels of fuel saving performance, cleaning power and engine protection, while meeting the industry's toughest standards ILSAC GF-6B performance standards. It is one of the best premium quality passenger car lubricant which specially developed for hybrid and downsized engines as well as compatible with latest generation after-treatment systems.



### PERFORMANCE LEVEL:

API SP, API SP RESOURCE CONSERVING, ILSAC GF-6A, ILSAC GF-6B\*, GM 6094, CHRYSLER MS-6395M, Dexos 1 Gen 2

### BENEFITS & ADVANTAGES:

- Increases fuel efficiency / Improved fuel economy.
- Ultimately reduces emissions / Decreases greenhouse gas emissions.
- Prevents sludge formation and varnish deposits.
- Improves engine performance and durability, Formulated to help protect against LSPI.
- Improvement in oil robustness and wear protection.
- Efficient Anti-Oxidant specifications, Meets latest oxidation performance needs, including IIH.

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS				
	ILSAC GF-6A			ILSAC GF-6B	
	5W20	0W20	5W30	10W30	0W16*
Density @ 15 °C, g/cm <sup>3</sup>	0.8504	0.8442	0.8468	0.8525	0.8382
Viscosity @ 40 °C, cSt	49.56	47.81	68.88	70.82	36.68
Viscosity @ 100 °C, cSt	8.682	8.871	11.65	11.25	7.235
Viscosity Index	157	168	165	151	166
Flash Point COC, °C	230	228	230	234	230
Pour Point, °C	-42	-45	-42	-39	-45
Calcium, ppm	1239	1244	1251	1257	1215
zinc, ppm	749	757	759	751	760
magnesium, ppm	542	556	549	544	550
molybdenum, ppm	74	78	76	79	79
Nitrogen, ppm	1016	1020	1018	1011	1050
Phosphorus, ppm	736	751	739	755	725
TBN, mg KOH/g	8.58	8.65	8.61	8.73	8.62

## STÄRK FULLY SYNTHETIC GASOLINE ENGINE OIL

**Petrovöll STÄRK Fully Synthetic** is a high-performance motor oil with optimised temperature-viscosity characteristics. Developed especially for modern petrol-driven and/or diesel car engines, it provides optimum protection for engines requiring multi-grade oil and is manufactured on the basis of fully synthetic PAO's (poly-alpha olefins) with an optimized viscosity range. The optimum balance of its base oils and additives, developed specifically for this application, result in the outstanding performance level of this motor oil.



### PERFORMANCE LEVEL:

API SN, ACEA A5/B5-04, MB 229.1,229.3, Porsche Approved C20, VW 502.00,505.00, BMW Long-life Oil, Peugeot-Citroen, Ferrari

### BENEFITS & ADVANTAGES:

- Provides exceptional detergency and anti-wear properties for extended maintenance intervals
- Delivers the highest level of oxidation stability and lowered HTHS viscosity for maximum fuel savings
- Provides reliable protection against corrosion, black sludge and piston deposits
- Ensures optimal performance due to the lubricant's synthetic basis added to high performance additives
- Extends drain capability and ensures the best possible cold-start properties and rapid lubrication of the engine

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS				
Viscosity Grade	5W20	5W30	0W30	5W40	0W40
Color	L 2.5	L 2.5	L 2.5	L 2.5	L 2.5
Kin. Viscosity @ 40 °C, cSt	38.02	58.40	59.40	84.10	76.60
Kin. Viscosity @ 100 °C, cSt	7.271	10.50	11.00	14.00	14.00
Viscosity Index	158	172	180	185	190
Density @ 15 °C, g/cm <sup>3</sup>	0.8480	0.8510	0.8380	0.8510	0.8320
Foam Sequence I, II, III, ml/ml	0/0	0/0	0/0	0/0	0/0
TBN, mg KOH/g	7.93	7.93	11.00	7.93	11.00
Flash Point COC, °C	224	222	228	226	220
Pour Point, °C	-42	-42	-45	-45	-45

## STÄRK SEMI SYNTHETIC ENGINE OIL

**Petrovöll STÄRK Semi Synthetic** is a partly synthetic, multi-grade, low-viscosity engine oil for use in petrol and diesel car engines. Produced using selected mineral-based and synthetic base oils, its high level of performance is achieved through the interaction of its special base oil composition and advanced additives.

The modern design of **Petrovöll STÄRK Semi Synthetic** grades makes a wide range of applications possible and ensures reliable performance under all operating conditions.

### PERFORMANCE LEVEL:

API SM, ACEA A3/B4-04, MB 229.1, Ford Motor Co.M2C-153E, BMW Long-life Oil-98, VW 505 00/500 00, Japanese Engines Qualified



### BENEFITS & ADVANTAGES:

- Provides a stable lubricating film, even with hot oil and under excessive loads
- Delivers a higher level of oxidation protection and very low oil consumption
- Offers reliable protection against 'black sludge'
- Prevents adhesion, lacquering and coking of cylinders, pistons, valves and turbochargers
- Reduces maintenance costs through extended engine life
- Provides superior anti-friction and engine cleaning properties

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS				
Viscosity Grade	5W30	10W30	10W40	15W40	20W50
Color	L 2.5	L 2.5	L 2.5	L 2.5	L 3.0
Kin. Viscosity @ 40 °C, cSt	70.60	74.30	91.62	98.90	141.9
Kin. Viscosity @ 100 °C, cSt	11.56	11.89	14.20	14.84	18.62
Viscosity Index	158	150	160	157	148
Density @ 15 °C, g/cm <sup>3</sup>	0.8620	0.8770	0.8780	0.8750	0.8800
Foam Sequence I, II, III, ml/ml	0/0	0/0	0/0	0/0	0/0
TBN, mg KOH/g	7.50	7.50	7.50	7.50	7.50
Flash Point COC, °C	224	222	220	220	236
Pour Point, °C	-36	-33	-33	-30	-27

## VÖLEX MULTI GRADE MINERAL GASOLINE ENGINE OIL

**Petrovöll VÖLEX** is a high-performance engine oil with SAE grade 15w40 and 20w50 produced using selected mineral oils. It is eminently suited to petrol and diesel engines, with or without turbocharging. It is formulated using highly refined base stocks and state of the art additive technology. It is recommended for use on most common engines, high-powered cars, vans and light trucks, including those with multi-valve techniques and vehicles fitted with or without catalytic converters, operating under the most severe driving conditions.

### PERFORMANCE LEVEL:

API SL, ACEA A3/B3, MB 229.1, VW 501 01 / 505 00



### BENEFITS & ADVANTAGES:

- Provides a stable lubricating film, even with hot oil and under excessive loads
- Ensures very low oil consumption and Improved fuel economy and filterability
- Prevents adhesion, lacquering and coking of cylinders, pistons, valves and turbochargers
- Provides high level of oxidation protection
- Effectively controls wear, rust, and corrosion to ensure long engine life
- Provides year-round operation with good viscosity-temperature behaviour and high shear stability
- Delivers properly balanced detergent and dispersion that ensures a clean engine

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS	
Viscosity Grade	15W40	20W50
Color	L 2.5	L 3.0
Kin. Viscosity @ 40 °C, cSt	105.3	160.1
Kin. Viscosity @ 100 °C, cSt	15.10	18.50
Viscosity Index	150	130
Density @ 15 °C, g/cm <sup>3</sup>	0.8781	0.8863
Foam Sequence I, II, III, ml/ml	0/0	0/0
TBN, mg KOH/g	7.50	7.50
Flash Point COC, °C	220	240
Pour Point, °C	-27	-24

## VÖNO MINERAL GASOLINE ENGINE OIL

**Petrovöll VÖNO** is a mineral-based, engine oil for petrol and diesel car engines with and without turbocharger. It is produced using selected base oils with excellent additive packages to provide high performance and high operating reliability at extreme conditions.

**VÖNO** has a high viscosity index, high thermal stability and provides a stable lubricant film even under high loads. Its high-quality additives ensure excellent protection against wear and corrosion and keeps the engine clean even under unfavourable conditions.

### PERFORMANCE LEVEL:

API SL, SJ, SF, CCMC G2/D1, Mil-L-46152C



### BENEFITS & ADVANTAGES:

- Prevents adhesion, lacquering and coking of cylinders, pistons, valves and turbochargers
- Delivers a high level of oxidation protection
- Ensures proper functioning of hydraulic tappets (hydraulic valve clearance compensation)
- Offers balanced detergent and dispersion ensures a clean engine
- Highly controls wear, rust, and corrosion to ensure long engine life
- Provides a cleaner and smoother running engine

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS					
Viscosity Grade	10W	30	40	50	15W40	20W50
Color	L 2.5	L 3.0	L 3.0	L 3.0	L 3.0	L 3.5
Kin. Viscosity @ 40 °C, cSt	33.80	95.20	140.1	226.5	108.5	165.1
Kin. Viscosity @ 100 °C, cSt	5.545	10.90	14.10	19.56	14.56	18.62
Viscosity Index	100	98	97	98	138	126
Density @ 15 °C, g/cm <sup>3</sup>	0.886	0.892	0.897	0.899	0.878	0.898
Foam Sequence I, II, III, ml/ml	0/0	0/0	0/0	0/0	0/0	0/0
TBN, mg KOH/g	6.50	6.50	6.50	6.50	6.50	6.50
Flash Point COC, °C	218	236	240	245	220	230
Pour Point, °C	-33	-18	-15	-9	-27	-24

# VIRÖ-TEC FULLY SYNTHETIC DIESEL ENGINE OIL

Petrovöll **VIRÖ-TEC Fully Synthetic** is an ultra high performance diesel engine oil formulated with the most advanced additives and HC synthetic base oils. It has been developed specifically for use in diesel engines subjected to high loads with extended maintenance intervals, such as heavy-goods vehicles, buses and construction machinery. Its modern blend makes a wide range of applications possible according to the manufacturer's specifications.

Petrovöll **VIRÖ-TEC** delivers optimum protection for all heavy-duty engines requiring multi-grade oil, including EGR diesel engines. Its synthetic base provides both superior cold temperature and high temperature properties while its additive package is specifically formulated to address the severe demands of a diesel engine's internal environment. Its stable TBN additive package neutralizes damaging acids produced during the combustion process and will not rapidly deplete.



## PERFORMANCE LEVEL:

API CK-4\*, CJ4, CI-4, CH4 ACEA: E7-08 A3/B4 JASO DH-1, Volvo VDS-3, GM Allison C 4, MB-228.3, Man 3275, CAT ECF- 1a, Volvo, Renaults, Cummins CES 20077

## BENEFITS & ADVANTAGES:

- Guarantees the longest service intervals according to the manufacturer's specification
- Provides excellent fuel economy due to low-viscosity characteristics
- Provides safer year-round operation due to its outstanding viscosity-temperature behaviour and high shear stability
- Offers exceptional detergency and anti-wear properties
- Effectively controls soot, sludge and piston deposits
- Delivers exceptional performance due to the lubricant's synthetic base and high performance additives
- Provides extended drain capability

## SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS				
Viscosity Grade	5W20	5W30	10W30*	5W40	0W40
Color	L 3.0	L 3.0	L 3.0	L3.0	L 3.0
Kin. Viscosity @ 40 °C, cSt	49.32	66.80	75.56	83.50	78.60
Kin. Viscosity @ 100 °C, cSt	8.433	11.15	11.50	14.40	13.83
Viscosity Index	147	160	145	180	182
Density @ 15 °C, g/cm <sup>3</sup>	0.8521	0.8562	0.8580	0.8510	0.8351
Foam Sequence I, II, III, ml/ml	0/0	0/0	0/0	0/0	0/0
TBN, mg KOH/g	11.00	11.00	11.00	11.00	11.00
Flash Point COC, °C	224	232	220	228	224
Pour Point, °C	-42	-42	-42	-42	-45

## VIRÖ-TEC SEMI SYNTHETIC DIESEL ENGINE OIL

**Petrovöll VIRÖ-TEC Semi Synthetic** is a multigrade diesel engine oil formulated to provide optimum protection and premium all round performance in diesel engines used in the construction field and for road transport. It is produced using advanced additive technology that meets the latest low emission and high performance requirements of US, European and Japanese engine makers, and provides protection against oil thickening, high temperature, sludge build up, oil degradation and corrosion.

**Petrovöll VIRÖ-TEC** is developed specifically for diesel engines with an extended maintenance interval such as heavy-goods vehicles, buses and work machines. Its innovative blend makes a wide range of applications possible and ensures safe operation, even under difficult conditions.



### PERFORMANCE LEVEL:

Meets and exceeds the requirements for:

API CI-4, CH-4, CG-4, CF-4, CF, ACEA: E3, E5/E7, Volvo VDS-3, GM Allison C4, MB - 228.3, Man271

### BENEFITS & ADVANTAGES:

- Provides wear protection and longer oil life due to its advanced additive technology
- Delivers reliable protection against corrosion and black sludge
- Offers a high level of oxidation protection
- Delivers exceptional performance due to the lubricant's synthetic basis added to high performance additives
- Meets exhaust emission standards
- Guarantees longest service intervals

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS		
Viscosity Grade	10W40	15W40	20W50
Color	L 3.5	L 3.5	L 3.5
Kin. Viscosity @ 40 °C, cSt	97.80	92.60	155.1
Kin. Viscosity @ 100 °C, cSt	14.69	13.83	18.90
Viscosity Index	156	152	135
Density @ 15 °C, g/cm <sup>3</sup>	0.8781	0.875	0.882
Foam Sequence I, II, III, ml/ml	0/0	0/0	0/0
TBN, mg KOH/g	11.00	11.00	11.00
Flash Point COC, °C	224	220	236
Pour Point, °C	-33	-30	-27

## D-TEC MINERAL DIESEL ENGINE OIL

**Petrovöll D-TEC Diesel Engine Oil** is a premium, mineral engine oil. It delivers an exceptionally wide range of applications and also functions as a high quality heavy-duty crank case oil with moderate performance level for older designed commercial fleets with diesel and gasoline engines.

**Petrovöll D-TEC** is formulated using high quality base oils and efficient additive technology, which includes a dispersant detergent rust inhibitor, high temperature oxidation inhibitor and an anti-wear agent for engine oil cleanliness maintenance, wear & corrosion protection and oxidation inhibition. This formulation effectively protects engines against oil thickening, high temperature oxidation deposits, sludge and thermal oil degradation and TBN reserve.



### PERFORMANCE LEVEL:

Meets and exceeds the requirements for:  
API CF, CE, CD/SF & CC/SC, MIL-L-2104 B , MIL-L-2105D, CAT-T02, Ford M2C159B

### BENEFITS & ADVANTAGES:

- Provides excellent TBN retention throughout oil drain period
- Ensures low oil consumption and increased oxidation protection
- Effectively controls soot, sludge and piston deposits
- Provides controlled engine deposits due to its advanced detergent additive technology
- Meets exhaust emission standards
- Delivers reliable performance for long distance trucking operation on road

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS				
Viscosity Grade	SAE 30	SAE 40	SAE 50	15W40	20W50
Color	L 3.0	L 3.0	L 3.5	L 3.0	L 3.0
Kin. Viscosity @ 40 °C, cSt	97.70	139.8	210.2	102.8	158.2
Kin. Viscosity @ 100 °C, cSt	11.08	14.05	18.35	14.00	18.10
Viscosity Index	98	97	96	138	127
Density @ 15 °C, g/cm <sup>3</sup>	0.892	0.894	0.897	0.882	0.894
Foam Sequence I, II, III, ml/ml	0/0	0/0	0/0	0/0	0/0
TBN, mg KOH/g	6.00	6.00	6.00	6.00	6.00
Flash Point COC, °C	234	240	250	220	236
Pour Point, °C	-21	-18	-15	-27	-24

## CNG-TEC DIESEL ENGINE OIL

**Petrovöll CNG-TEC** is a high performance heavy duty motor oil formulated specifically for spark ignited CNG and LNG fueled truck and bus engines that operate under more severe conditions than diesel engines. Its advanced detergent and dispersant properties effectively reduce the formation of carbon deposits, lacquer and sludge, resulting in cleaner engines, longer oil life and reduced filter costs.

**Petrovöll CNG-TEC** offers a complete solution for both conventional heavy-duty diesel engine oil and best-in-class CNG engines. Its excellent TBN and reverse alkalinity properties efficiently protect engine components from acidic materials that are formed during combustion or as a result of degradation.



### PERFORMANCE LEVEL:

Meets and exceeds the requirements for:  
API CG4, CF4, MAN 3271-1, MB 226.9, Renault RGD, MAN 271, MB 228.1,  
API CF-4, ACEA E2

### BENEFITS & ADVANTAGES:

- Ensures effective ash control
- Delivers exceptional oxidation and nitration control
- Reduces scoring & scuffing and provides wear protection
- Offers balanced detergent and dispersion ensures a clean engine
- Provides better cleaning performance

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS
Viscosity Grade	15W40
Color	L 3.0
Density @ 15 °C, g/cm <sup>3</sup>	0.875
Kin. Viscosity @ 40 °C, cSt	116.0
Kin. Viscosity @ 100 °C, cSt	15.30
Viscosity Index	140
TBN, mg KOH/g	6.4
Flash Point COC, °C	224
Sulfated Ash, wt%	0.95
Pour Point, °C	-27

## MÖTPRO 4-STROKE MOTORCYCLE OIL

Petrovöll **MÖTPRO 4T Motorcycle Oil** is a high-performance engine oil formulated using HC high quality base oils. It is developed specifically for high revving 4-stroke scooter engines operating under difficult conditions.

**MÖTPRO** is ideal for 4-stroke scooters with a shared oil circulation system for the engine, clutch and gears. It provides a stable lubricating film under difficult conditions such as short-haul operations or under permanent load conditions at full throttle with high speeds. It guarantees low wear to the engine and gearbox component parts and also meets the stringent friction coefficient requirements of JASO MA-2 for best clutch performance.



### PERFORMANCE LEVEL:

Recommended for JASO T903:2011 at MA 2 levels - API SN, SM, SL, SJ

### BENEFITS & ADVANTAGES:

- Provides a high level of oxidation protection
- Delivers excellent clutch performance
- Offers outstanding protection against wear and corrosion
- Ensures superior high speed engine protection to help extend engine life
- Provides protection against thermal and mechanical breakdown
- Delivers excellent gear shift quality
- Ensures excellent wet clutch performance
- Provides extreme protection at high temperatures

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS	
Viscosity Grade	20W40	20W50
Color	L 3.5	L 3.5
Kin. Viscosity @ 40 °C, cSt	120.6	156.6
Kin. Viscosity @ 100 °C, cSt	14.50	18.00
Viscosity Index	122	128
Density @ 15 °C, g/cm <sup>3</sup>	0.882	0.883
Foam Test, Sequence II	0/0	0/0
TBN, mg KOH/g	7.80	7.80
Flash Point COC, °C	240	234
Pour Point, °C	-24	-24

## MÖTPRO 2-STROKE MOTORCYCLE OIL

Petrovöll **MÖTPRO 2T** Motorcycle Oil is a mineral-based engine oil for air-cooled and water-cooled 2-stroke engines. It can be used for multi-functional purposes and is suitable for both separate and mixed lubrication systems.

**MÖTPRO 2T's** superior quality formulation is non-ash forming, economical and is specifically developed for small to medium size air-cooled two-stroke engines used in motorcycles, outboard engines and scooters. It provides excellent miscibility and fluidity characteristics and makes use of a low ash additive system, which offers protection against scuffing of piston rings and liner wear by minimizing piston ring deposits.

### PERFORMANCE LEVEL:

Meets and exceeds the requirements for:  
API TC, JASO FB, JASO FC, JASO FD, ISO-L-EGD Level



### BENEFITS & ADVANTAGES:

- Suits both separate and mixed lubrication systems
- Offers very good anticorrosion, antirust and anti-wear properties
- Reduces smoke exhaust emissions
- Reduces deposits on piston rings and outlet ports
- Suits three-wheelers and other utility vehicles powered by a two-stroke engine
- Provides effective lubrication at varying speeds
- Ensures longer spark plug & engine life
- Maintains optimum viscosity at different temperatures
- Self mixing with leaded & unleaded petrol

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS
Color	Blue
Density @ 15 °C, g/cm <sup>3</sup>	0.8753
Kin. Viscosity @ 40 °C, cSt	48.90
Kin. Viscosity @ 100 °C, cSt	8.000
Viscosity Index	134
Flash Point COC, °C	110
Pour Point, °C	-21

## DEXÖ ATF CVT AUTOMATIC TRANSMISSION FLUID

**Petrovöll DEXÖ ATF-CVT** is a fully synthetic high-performance Automatic Transmission Fluid (ATF) developed specifically for use in modern Continuous Variable Transmission (CVT) drives. It is formulated to meet JATCO and Nissan FF and SF specifications, as well as a variety of other manufacturers using Push Belt CVTs.

**DEXÖ ATF-CVT** is produced using selected synthetic base oils and a special additive technology developed specifically to meet the special requirements of CVT drives with push and pull belts. It features the highest production quality control system in place to ensure the most consistent product possible.



### PERFORMANCE LEVEL:

Meets and exceeds the requirements for:  
Audi/VW TL 52 180, BMW EZL799, Dodge/Jeep NS-2/CVTF+4/MOPAR CVT 4, Honda HMMF/HCF-2, Kia/Hyundai SP-CVT 1, MB CVT 28/236.20, Toyota/Lexus CVT TC/FE

### BENEFITS & ADVANTAGES:

- Offers the most advanced technology for excellent metal/metal friction coefficient performance and friction coefficient stability
- Provides the best wear protection properties for reliable operation and the longest service life
- Delivers outstanding ageing and oxidation stability
- Ensures excellent behaviour at low temperatures
- Offers excellent thermal and oxidative stability
- Provides low-temperature fluidity, shear stability, and high wear protection

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS
Property	Value
Density @ 15 °C, g/cm <sup>3</sup>	0.8480
Kin. Viscosity @ 40 °C, cSt	32.80
Kin. Viscosity @ 100 °C, cSt	7.210
Viscosity Index	193
Flash Point COC, °C	210
Pour Point, °C	-48
Color	L 6.5
Brookfield Viscosity @ -40°C, cP	10,200

## DEXÖ ATF DEXRON VI

**Petrovöll DEXÖ ATF VI** is a high performance, synthetic automotive transmission fluid for modern automatic gearboxes. It is formulated to have reduced viscosity using the most advanced additives and a special base oil composition made of HC synthetic oils and fully synthetic poly-alpha-olefins (PAO). It is ideal for use in modern 6/8/9-speed automatic transmissions in SUV, mid-size and luxury vehicles.

**DEXÖ ATF VI** is designed to meet the stringent service fill requirements of General Motors Dexron VI specification with more consistent shift performance even in extreme conditions, and degrades less over time. It provides limited warranty protection for 2006 and newer General Motor vehicles and can also help deliver excellent performance in 2005 and earlier GM vehicles, wherever Dexron is specified.



### PERFORMANCE LEVEL:

Meets and exceeds the requirements for:  
DEXRON VI, MERCON LV, JASO 1ALV, BMW ETL 7045 E/ETL 8072 B MB 236.41

### BENEFITS & ADVANTAGES:

- Reduces sludge and varnish build ups
- Provides stable synthetic base oil that resists oxidation, thereby extending transmission life through superior wear protection
- Reduces viscosity for better fuel efficiency and minimal tendency to foam
- Protects transmission gears and allows them to operate smoothly
- Maintains oil film strength throughout the drain interval

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS
Color	L 6.5
Density @ 15 °C, g/cm <sup>3</sup>	0.8375
Kin. Viscosity @ 40 °C, cSt	28.23
Kin. Viscosity @ 100 °C, cSt	6.463
Viscosity Index	194
Flash Point COC, °C	220
Pour Point, °C	-51
Brookfield Viscosity @ -40°C, cP	9500

## DEXÖ ATF DEXRON III

Petrovöll **DEXÖ ATF DX III** is a universal type transmission fluid for use in modern automatic gearboxes where General Motors Dexron III is required. It has a high viscosity index, low pour point, and special additives to increase oxidation resistance, rust & corrosion protection and anti-wear properties. It is highly suitable for power steering units in passenger cars and commercial vehicles and is a multi-functional ATF that combines the requirements of the most common specifications from American, European and Japanese manufacturers.

It is formulated with premium, severely hydro processed base stocks and additives that help provide oxidation and thermal stability, friction control, load-carrying ability, corrosion and wear protection. This formulation also helps protect against the formation of deposits, sludge, varnish, and foam.

**DEXÖ ATF DX III** is designed for use in a wide range of automatic transmissions built by General Motors, Ford Motor Company and other manufacturers requiring a high performance, multi-purpose, automatic transmission fluid.



### PERFORMANCE LEVEL:

Meets and exceeds the requirements for:  
DEXRON III, MERCON V, MB 236.6, ZF TE-ML 17C, Allison C-4, CATERPILLAR TO-4

### BENEFITS & ADVANTAGES:

- Provides excellent shifting characteristics at low temperatures and permanently high friction coefficient level
- Offers the best wear protection properties for reliable operation and the longest service life
- Delivers outstanding ageing and oxidation stability and minimal tendency to foam
- Protects against corrosion, wear, sludge accumulation and adhesion
- Maintains neutral behaviour towards gasket materials
- Miscible and compatible with other ATF
- Offers compatibility with seal material

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS
Color	L 6.5
Kin. Viscosity @ 40 °C, cSt	34.65
Kin. Viscosity @ 100 °C, cSt	7.450
Viscosity Index	190
Density @ 15 °C, g/cm <sup>3</sup>	0.8590
Foam Sequence I, II, III, ml/ml	0/0
Flash Point COC, °C	220
Pour Point, °C	-45
Brookfield Viscosity @-40°C,cP	10,500

## DEXÖ ATF DEXRON II

Petrovöll DEXÖ ATF DX II is a universal type transmission fluid ideal for use in modern automatic gearboxes where General Motors Dexron II is required. It has a high viscosity index, low pour point and special additives to increase oxidation resistance, rust and corrosion protection and anti-wear properties. It is highly suitable for power steering units in passenger cars and commercial vehicles.

### PERFORMANCE LEVEL:

GM DEXRON II

### BENEFITS & ADVANTAGES:

- Offers excellent anti-wear properties
- Provides compatibility with seal materials
- Protects against deposit formation
- Performs with effective fluidity over a wide range of temperatures

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS	TESTS	RESULTS
Color	L 6.5	Viscosity Index	170
Density @ 15 °C, g/cm <sup>3</sup>	0.8482	Flash Point COC, °C	210
Kin. Viscosity @ 40 °C, cSt	35.83	Pour Point, °C	-45
Kin. Viscosity @ 100 °C, cSt	7.210	Brookfield Viscosity @ -40°C, cP	35,500

## DEXÖ ATF - TYPE A SUFFIX A

Petrovöll DEXÖ Type 'A' is a high quality automatic transmission power steering and hydraulic oil. It contains a high viscosity index, low pour point, and special additives that increase oxidation resistance and rust & corrosion protection. It is ideal for use in heavy trucks and off road vehicles as well as certain (manual) passenger car transmissions.

### PERFORMANCE LEVEL:

Meets and exceeds the requirements for: GM Type 'A' Suffix 'A', Mercedes Benz 236.2 and Allison C4

### BENEFITS & ADVANTAGES:

- Provides smooth and trouble free operation
- Protects against deposit formation
- Offers superior foam resistance
- Provides excellent anti-oxidant and anti-wear properties

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS	TESTS	RESULTS
Color	L 6.5	Viscosity Index	154
Density @ 15 °C, g/cm <sup>3</sup>	0.8582	Flash Point COC, °C	212
Kin. Viscosity @ 40 °C, cSt	33.15	Pour Point, °C	-45
Kin. Viscosity @ 100 °C, cSt	6.501	Brookfield Viscosity @ -40°C, cP	35,000

## MAX-GRÖB SYNTHETIC GEAR OIL

Petrovöll **MAX-GRÖB** Synthetic Premium Automotive Gear Oil is a synthetic based extreme pressure gear lubricant blended with premium base stocks and fully approved with MT-1 standard. It is formulated to deliver superior performance & protection in automotive gear applications and provide chemical & thermal stability over a wide temperature range under extended drain operation. It can be operated at low temperature and offers excellent protection from rust resulting from water contamination and wet conditions.



### PERFORMANCE LEVEL:

Meets requirements for:  
API GL-5 Level, US Military Specification MIL-L-2105D, EATON Axle Division Bulletin 90-104

### BENEFITS & ADVANTAGES:

- Maximizes equipment life
- Protects against rust, corrosion and provides a high level of oxidation protection
- Delivers outstanding performance against low speed/high torque wear
- Delivers smooth and easy gear changes

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS	
Viscosity Grades	75W90	80W140
Density @ 15 °C, g/cm <sup>3</sup>	0.884	0.902
Kin. Viscosity @ 40 °C, cSt	102.6	223.4
Kin. Viscosity @ 100 °C, cSt	15.50	29.12
Viscosity Index	160	170
Flash Point COC, °C	210	220
Pour Point, °C	-45	-30
Brookfield Viscosity, cP	97,000 @-40°C	110,000 @-26°C

## MAX-GRÖB GEAR OIL

**Petrovöll MAX-GRÖB Automotive Gear Oil** is a high quality automotive gear lubricant that contains sulphur phosphorus EP (Extreme Pressure) additives, which provide an extremely high level of chemical and thermal stability. It is resistant to high oxidation and ensures smooth gear changes and reliable operation. It is formulated to minimize thermal degradation, staining, rusting & corrosion and is highly recommended for use in synchromesh transmissions as it provides extra protection for severe loads.

### PERFORMANCE LEVEL:

Meets requirements for:  
API GL-5 Level, AGMA-250.04; David Brown-Table M; ARAMCO-26 SAMSS - 045



### ALSO AVAILIABLE:

SAE80W90 - API GL-4

SAE85W140 - API GL-4

SAE90 - API GL-1

SAE140 - API GL-1

### BENEFITS & ADVANTAGES:

- Offers full protection for transmissions with bronze components
- Protects against rust and corrosion
- Saves energy and provides excellent wear protection
- Delivers good noise reduction
- Ensures smooth and easy gear changes

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS			
Viscosity Grades	90	140	80W90	85W140
Density @ 15 °C, g/cm <sup>3</sup>	0.887	0.901	0.884	0.902
Kin. Viscosity @ 40 °C, cSt	200.2	436.3	143.1	356.8
Kin. Viscosity @ 100 °C, cSt	17.95	29.70	14.96	27.36
Viscosity Index	98	97	105	103
Flash Point COC, °C	224	240	216	236
Pour Point, °C	-18	-9	-27	-21
Brookfield Viscosity, cP			95,000 @ -26 °C	85,000 @ -12 °C

## MARINEÖL SYNTHETIC MARINE CYLINDER OIL

Petrovöll **MARINEÖL Synthetic Marine Oil** is produced using HC synthetic base oils. Its exceptionally high level of performance is achieved through the interaction of these base oils with specially developed, advanced additives. It is characterised by very good corrosion protection for all engine parts and reliably prevents salt deposits. It provides improved durability in the face of typical problems associated with modern inboard and outboard engines such as fuel dilution and water entry, and thus guarantees good wear protection and safe operation.



### PERFORMANCE LEVEL:

MAN Diesel & Turbo, Winterthur gas & diesel, Wärtsilä, DDC 93k214, JASO MA (T903:2011), NMMA FC-W/FC-W

### BENEFITS & ADVANTAGES:

- Provides superior fluid film protection against metal-to-metal contact
- Ensures high shear stability and retains film strength at high loads and high temperatures
- Reduces scuffing, pitting and rolling contact fatigue
- Protects against wear and corrosion
- Provides a high level of oxidation protection
- Improves resistance to fuel entry and water contamination

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS			
Viscosity Grade	SAE 15W40			
TBN, mg KOH/g	15	20	40	50
Color	L 3.0	L 3.5	L 4.0	L 5.0
Kin. Viscosity @ 40 °C, cSt	93.00	97.89	104.3	108.1
Kin. Viscosity @ 100 °C, cSt	14.10	14.26	14.86	15.16
Viscosity Index	156	150	148	147
Density @ 15 °C, g/cm <sup>3</sup>	0.870	0.882	0.887	0.890
Foam Sequence I, II, III, ml/ml	0/0	0/0	0/0	0/0
Flash Point COC, °C	222	222	220	220
Pour Point, °C	-36	-33	-30	-30

## MARINEÖL MINERAL MARINE OIL

**Petrovöll MARINEÖL Mineral Marine Oil** is a marine cylinder lubricant for use in all types of low speed cross head diesel engines burning residual fuels with sulfur contents of up to 2.36% weight. It is ideally suited for the new generation of highly rated, fuel-efficient slow-speed marine diesel engines operating with high pressure, high temperatures and longer strokes. Its high TBN ensures that the large amount of strong acid formed during combustion is dissipated efficiently.



### PERFORMANCE LEVEL:

MAN diesel & turbo, Winterthur gas & diesel, Wärtsilä, Mitsubishi

### BENEFITS & ADVANTAGES:

- Offers exceptional detergency and anti-wear properties
- Controls soot, sludge and piston deposits
- Extends drain capability & high temperature properties
- Highly rated for medium speed diesel engines used in marine and stationary power generation applications, bearings and stern-tubes & reduction gear lubrication

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS							
	SAE 40				SAE 50			
Viscosity Grade								
TBN, mg KOH/g	55	70	85	100	55	70	85	100
Color	L 4.5	L 4.5	L 5.0	L 5.5	L 4.5	L 4.5	L 5.0	L 5.5
Kin. Viscosity @ 40 °C, cSt	144.6	144.8	143.6	143.1	208.3	201.3	201.8	202.3
Kin. Viscosity @ 100 °C, cSt	14.56	14.67	14.81	14.97	18.65	18.79	18.98	19.16
Viscosity Index	99	100	103	105	99	104	106	107
Density @ 15 °C, g/cm <sup>3</sup>	0.916	0.918	0.919	0.923	0.915	0.920	0.922	0.925
Foam Sequence I, II, III, ml/ml	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Flash Point COC, °C	240	242	246	248	242	248	244	246
Pour Point, °C	-18	-18	-15	-15	-15	-15	-12	-9

## MARINEÖL TRUNK PISTON MARINE OIL

**Petrovöll MARINEÖL Mineral Marine Piston Oil** is a range of trunk piston engine oils that combine an exclusive formulation of the latest additive technologies with the finest quality highly refined base oils. This formulation provides a substantial safety margin to cope with higher stress levels of even the latest and future designs of diesel engines. The specialized additives in this product ensure excellent detergency, discrepancy, improved oxidation stability and excellent anti-wear and reparability properties.



### PERFORMANCE LEVEL:

Recommended for use in WARTSILA 4T, WARTSILA 8L38 engines

### BENEFITS & ADVANTAGES:

- Offers a wide range of applications in boat engines and other diesel and petrol-driven units
- Protects against wear & corrosion and provides a high level of oxidation protection
- Improves resistance to fuel entry and water contamination
- Effectively controls soot, sludge and piston deposits
- Extends drain capability & high temperature properties
- Ensures rapid lubrication and low cold wear

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS									
	SAE 40					SAE 50				
Viscosity Grade										
TBN, mg KOH/g	15	20	40	50	55	15	20	40	50	55
Color	L 3.5	L 3.5	L 4.0	L 4.5	L 4.5	L 4.5	L 3.5	L 4.0	L 4.5	L 4.5
Kin. Viscosity @ 40 °C, cSt	144.6	144.8	143.6	143.1	150.5	201.3	201.8	202.3	202.3	202.3
Kin. Viscosity @ 100 °C, cSt	14.56	14.67	14.81	14.97	15.00	18.79	18.98	19.16	19.16	19.16
Viscosity Index	99	100	103	105	99	104	106	107	107	107
Density @ 15 °C, g/cm <sup>3</sup>	0.916	0.918	0.919	0.923	0.915	0.920	0.922	0.925	0.925	0.925
Foam Sequence I, II, III, ml/ml	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Flash Point COC, °C	240	242	246	248	242	248	250	240	242	244
Pour Point, °C	-18	-18	-15	-15	-15	-15	-12	-9	-9	-9

## MARINEÖL 2-STROKE OUTBOARD OIL WATER COOLED

Petrovöll **MARINEÖL 2T Boat Engine Oil** is a 2-stroke, high-performance engine oil produced using selected, high quality base oils. It is formulated with a low-ash additive composition that ensures safe operation and leaves almost no residues behind upon combustion. This prevents spark plug fouling and deposits in critical areas such as piston rings and outlet ports, and ensures a long service life of the engine.

**MARINEÖL 2T** is developed specifically to meet the requirements of the TC-W 3 (Two-Cycle Water-cooled) specifications from NMMA (National Marine Manufacturers Association). Not only does it provide outstanding protection against corrosion and wear, it also ensures excellent cleanliness of all critical engine parts.



### PERFORMANCE LEVEL:

API TC, NMMA TC-W 3

### BENEFITS & ADVANTAGES:

- Provides outstanding protection against wear and corrosion
- Ensures virtually residue-free combustion
- Reduces deposits on piston rings, outlet ports and spark plugs
- Offers multi-functional application possibilities
- Suits both air-cooled and water-cooled 2-stroke engines
- Suits both separate and mixed lubrication

### SPECIFICATIONS & TECHNICAL PARAMETERS

PROPERTY	VALUE
Density at 15°C, g/cm <sup>3</sup>	0,87
Kinematic Viscosity KV 40 cSt	50,7
Kinematic Viscosity KV 100 cSt	7,1
Viscosity Index	133
Flash Point, °C	142
Pour Point, °C	-35
Total Base Number mg KOH/g	4,2
Color	Blue

## HYDKÖN HYDRAULIC OIL

**Petrovöll HYDKÖN** is a premium quality anti-oxidant, anti-wear & anti-rust hydraulic oil for industrial hydraulic applications. It is blended with selected high quality base stocks and special additives that deliver excellent demulsibility, superior oxidation & thermal stability and excellent load carrying capacity. It is applicable where hydraulic systems are susceptible to deposit build-up or where sludge and deposits form with conventional product systems containing gears and bears.



### PERFORMANCE LEVEL:

Meets and exceeds the requirements for:  
DIN 51524-2: 2006-09, HUSKY HS 207, VICKERS M-2950-S, Fives Cincinnati, HOCNF, PARKER (DENISON HF1, HF2 & HF0)

### BENEFITS & ADVANTAGES:

- High levels of wear protection and extended anti-rust performance
- Good detergent and dispersion characteristics
- Good corrosion protection and provides extreme resistance to oxidation
- Thermally stable and increases extreme pressure performance
- Good air separation ability and foaming behaviour
- Hydrolytic resistance

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS									
ISO Viscosity Grades	10	15	22	32	37	46	68	100	150	220
Density @ 15 °C, g/cm <sup>3</sup>	0.853	0.859	0.867	0.870	0.874	0.878	0.881	0.888	0.889	0.895
Kin. Viscosity @ 40 °C, cSt	10.00	15.00	22.00	32.00	37.00	46.00	68.00	100.00	150.00	220.00
Kin. Viscosity @ 100 °C, cSt	2.68	3.45	4.31	5.48	5.98	6.85	8.73	11.41	14.92	19.30
Viscosity Index	104	105	102	107	105	103	100	100	99	99
Flash Point COC, °C	180	190	210	216	220	230	240	250	252	258
Pour Point, °C	-30	-30	-27	-18	-18	-15	-15	-12	-9	-9

## LUB-TEC GRÖB INDUSTRIAL GEAR OILS

**Petrovöll LUB-TEC GRÖB** is formulated for use in high-performance gearboxes that need to transfer high intermittent and abruptly occurring loads. It greatly reduces friction, and thus the temperature level, in gear drives subjected to high loads, which in turn leads to a reduction in wear. Its high load carrying capacity and anti friction characteristics combine to offer superior performance in all industrial applications. It is formulated using a high viscosity index, solvent refined base oils and incorporates special sulfur-phosphorous additive to provide optimum extreme pressure performance.

### PERFORMANCE LEVEL:

Meets and exceeds the requirements for:  
ANSI/AGMA 9005-D94 (EP), U.S. Steel 224, AGMA 250.04 (EP), AGMA 251.02 (EP)



### APPLICATIONS:

- Enclosed industrial gear drives, spur, bevel, helical, worm and industrial hypoid gear cases
- Open gear drives (heavy grades), plain and rolling element bearings
- Good corrosion protection and provides extreme resistance to oxidation
- Industrial type reduction gearboxes on mining equipment, cement mills, machine tools and marine equipment

### BENEFITS & ADVANTAGES:

- Very high load carrying capacity
- High level of wear and tear protection
- Good ageing stability for longer oil life
- High thermal load capacity
- Minimal tendency to foam
- Very good protection against corrosion and oxidation

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS							
ISO Viscosity Grades	68	100	150	220	320	460	680	1000
Density @ 15 °C, g/cm <sup>3</sup>	0.8750	0.881	0.889	0.890	0.898	0.902	0.908	0.912
Kin. Viscosity @ 40 °C, cSt	68.00	100.0	150.0	220.0	320.0	460.0	680.0	1000
Kin. Viscosity @ 100 °C, cSt	8.701	11.28	14.85	19.15	24.84	31.80	62.29	86.95
Viscosity Index	99	99	98	98	100	100	160	170
Flash Point COC, °C	228	236	246	250	260	264	270	280
Pour Point, °C	-18	-15	-12	-9	-6	-6	-6	-6

## TURBINE OIL

**Petrovöll TURBINE Oil** is a high-quality, inhibited zinc-free turbine oil formulated using premium quality, chemically stable, high VI base stocks, which are further enhanced by the addition of oxidation inhibitors. These inhibitors provide resistance to thermal degradation over long periods of time in the presence of entrained air and catalyzing metals. It exhibits good demulsibility, permitting water and other contaminants to readily separate from the oil in the system reservoir.

### PERFORMANCE LEVEL:

Meets and exceeds the requirements for:

ISO 6743-3:2003 DAB (Severe Duty), AGMA-250.04; David Brown-Table M; ARAMCO-26 SAMSS - 045

### BENEFITS & ADVANTAGES:

- Reduces maintenance costs
- Reduces consumption
- Energy savings

## SCÖM COMPRESSOR OIL

**Petrovöll SCÖM Compressor Oil** is a high quality compressor oil formulated using the finest mineral base stocks combined with an ashless rust and oxidation inhibitor additive package. It delivers excellent resistance to oxidation demanded by the sophisticated air systems manufactured today. It provides outstanding high temperature stability, longer drain intervals and clean operation of equipment. It is also suitable for use in a wide range of applications including wire ropes, slide ways and chains.

### PERFORMANCE LEVEL:

Meets and exceeds the requirements for:

Siemens TLV 9013 04 (non-EP), ALSTOM HTGD 90 117 V0001 (non-EP), GEK 27070, 28143A, 32568F and 46506D, DIN 51515 Parts I & II, BS489:1999

### BENEFITS & ADVANTAGES:

- Reduces maintenance costs & consumption
- Good water separation characteristics
- Low deposit formation, increases oil change intervals & air filter life
- High anti-wear, thermal & oxidation stability
- Robust anti rust and anti corrosion performance

## SCHNEIDÖL CUTTING OIL

**Petrovöll SCHNEIDÖL Cutting Oil** contains a wide variety of specially selected additive components that are blended in controlled proportions with a suitable built-in biocide component. It exhibits high levels of detergency and reserve alkalinity, low foaming tendencies, and contains a bactericide to combat a wide spectrum of micro-organisms commonly present in sumps and reservoirs.

### APPLICATIONS:

General-purpose, soluble type cutting oil for use with water of normal hardness. A dilution of 4% to 8% is suitable for the majority of applications. It is advised to start with 4% and adjust as necessary. The emulsion is prepared by adding oil to water and not vice versa. It is non-staining and can be used on both ferrous and non-ferrous metals in a wide variety of machining operations including grinding, milling, turning and drilling. It provides longer life, better emulsion stability, improved precision & better surface finish.

### BENEFITS & ADVANTAGES:

- Minimizes friction between the tool & work piece to facilitate machining at increased production rate
- Prevents bacteria and fungus growth
- Improved cooling and ensures faster machining
- Excellent corrosion inhibition properties & increased tool life
- Produces stable and long lasting emulsions

## TRANSFORMER OIL

**Petrovöll TRANSFORMER Oil** is an uninhibited, highly refined naphthenic oil manufactured for use in electric transformers and switchgears as an insulating and heat transfer medium.

### PERFORMANCE LEVEL:

Meets and exceeds the requirements for: IEC-296 (1982), BS-148 (1984)

### APPLICATIONS:

Conforms to B.S. 148/1984 and IEC specifications 296 (82) and is also used as an insulating and cooling medium where oil of high thermal and oxidation stability is required. This product meets class I and class II of BS 148 and IEC 296 specifications.

### BENEFITS & ADVANTAGES:

- High dielectric strength
- Free from acids and corrosive sulfur
- Very low pour point
- Suppresses corona and arcing

## TRANS-TECH INDUSTRIAL TRANSMISSION OIL

**Petrovöll TRANS-TECH** is formulated using a highly refined base stock and selected additive package to provide outstanding oxidation, resistance compatibility and excellent protection against rust & corrosion. It is designed for use in differentials and final drives where lubrication of very heavily loaded gears and bearings is the main consideration. It also provides the friction control, low gear wear, good elastomer compatibility and oxidation stability performances required to meet the specifications for power shift transmissions, final drive and hydraulic systems. In hydraulic application, it provides maximum protection even for the highest-pressure systems.

### PERFORMANCE LEVEL:

Meets and exceeds the requirements for:

Caterpillar TO-4 and Caterpillar TO-4M requirements, Caterpillar 1M-PC test results also meet API CF-2 limits, Allison C-4 for SAE 10W and SAE 30 and CAT TO-4 for SAE 50 only, MIL-L-2104E, ZF-TE-ML-01, 03 and Eaton fuller

### APPLICATIONS:

Recommended for use in transmissions, drive trains, clutches and hydraulic systems, off highway contractors, logging, mining and farming equipment.

### BENEFITS & ADVANTAGES:

- Reduces gear wear in transmission, gearboxes and drive trains
- Outstanding slippage control
- Excellent performance for spur, helical bevel and worm gear boxes under severe application

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS			
Viscosity Grade	10W	30	40	50
Color	L 2.5	L 3.0	L 3.0	L 3.0
Kin. Viscosity @ 40 °C, cSt	38.12	106.82	142.3	222.3
Kin. Viscosity @ 100 °C, cSt	6.125	11.86	14.38	19.32
Viscosity Index	106	99	99	98
Density @ 15 °C, g/cm <sup>3</sup>	0.8881	0.8934	0.8952	0.9051
Foam Sequence I, II, III, ml/ml	0/0	0/0	0/0	0/0
TBN, mg KOH/g	11.50	11.50	11.50	11.50
Flash Point COC, °C	218	236	240	246
Pour Point, °C	-33	-24	-21	-18

## REFRIGERATION OIL

**Petrovöll REFRIGERATION Oil** is a high quality naphthenic oil especially formulated and manufactured for reciprocating and rotatory refrigeration compressors. It offers maximum trouble-free service life, excellent chemical and thermal stability, low wax content, low pour point, high dielectric strength, proper viscosity, and absence of contamination. It is also highly resistant to oxidation and deposit formation and is recommended for use in all types of refrigeration compressors and are miscible with all refrigerants except sulphur dioxide.

### BENEFITS & ADVANTAGES:

- Excellent high and low temperature stability
- Reduces compressor wear and lower maintenance
- Very good anti-wear properties
- Well defined miscibility and P-V-T relationships with HFC refrigerants

## HEAT TRANSFER OIL

**Petrovöll HEAT TRANSFER Oil** is a premium oil formulated using selected and highly refined petroleum base stocks. It provides good heat transfer efficiency with better resistance to thermal cracking and chemical oxidation. It has high specific heat and good thermal conductivity, which provide more rapid heating & greater system flexibility. It also offers very good thermal stability at bulk fluid temperatures up to 260°C and maximum heater skin temperature of 280°C.

### APPLICATIONS:

Can be used in open & closed systems in line with respective bulk oil temperature. Petrovöll Heat Transfer Oil is not recommended to be mixed with other oils as it may weaken the thermal resistance and oxidation stability, which may cause a change in other properties, affecting the oil's useful life.

### BENEFITS & ADVANTAGES:

- High chemical stability gives long oil life
- Minimum drag out reduces oil wastage
- Long oil life and reduced deposits decrease plant maintenance cost
- High quality base stocks resist formation of carbonaceous deposits and give consistent heating

## CIRCULATION OIL

**Petrovöll CIRCULATION Oil** is formulated from highly refined base stocks and an additive system that provides an extremely high level of chemical and thermal stability, rapid and complete separation from water and high resistance to emulsification. It delivers excellent performance in lubricating plain and rolling bearings and parallel shaft gearing and is recommended for use in steam turbines and hydro turbines with splash, bath and ring-oiling arrangements as well as all other continuous circulation methods involving pumps, valves and auxiliary equipment.

### PROPERTIES:

- Outstanding thermal/oxidation stability
- Excellent varnish and sludge control that help optimise cleanliness and extend compressor oil life
- High load carrying capability that protects equipment and extends life, helps minimize unexpected downtime and extends service periods
- Exceptional resistance to rusting and corrosion, very good anti-wear, demulsibility, foam control and air release and multi-metal compatibility

## DOT 5.1 BRAKE FLUID

**Petrovöll DOT 5.1 Brake Fluid** is a fully synthetic, low viscosity brake fluid with improved dry and wet boiling behaviour based on glycols with oxidation and corrosion inhibitors. It may be used in hydraulic brake and clutch systems in accordance with the manufacturer's specifications. It provides superior protection of brake and clutch hydraulics against deposits and corrosion.

### PERFORMANCE LEVEL:

Meets and exceeds the requirements for:  
FMVSS 116 - DOT 5.1, SAE J 1703/1704, ISO 4925 Class 3/4/5.1, JIS K2233 Class 3/4/5



## DOT 4 & DOT 3 BRAKE FLUID

**Petrovöll BRAKE FLUID** is a high quality brake fluid blended from PAG ethers and polyglycols. It is formulated to contain high quality oxidation and corrosion inhibitors to enhance its chemical stability.

### PERFORMANCE LEVEL:

Meets and exceeds the requirements for:  
SAE J 1704/1703, ISO 4925, NFRI2-640, FM VSS DOT 4\*

### BENEFITS & ADVANTAGES:

- High boiling point to prevent vapor forming in brake systems
- Firm braking pressure in all operating conditions
- Protects metals and rubbers used in brake and hydraulic systems
- Excellent chemical stability

## KÜHLER COOLANT ANTI FREEZE

**Petrovöll KÜHLER** is especially formulated to work on an engine's radiator system as a coolant, anti-freezer and anti-boiling fluid. It is an advanced, long-lasting liquid with pre-mixed formulation based on monoethylene glycol. It is free of nitrite, amine, phosphate and silicate and offers reliable protection to aluminium, copper, iron, bronze and cast iron engines and has been developed specifically to meet the requirements of modern aluminium and cast iron engines. It reliably protects against deposits and foam formation and thus ensures optimal heat dissipation.

### CHEMICAL PROPERTIES:

Contains water, mono-ethylene-glycol, anti-corrosives and anti-oxidants.  
(Available in Green, Red and Blue colours)



TESTS	RESULTS				
Concentration	30	33	40	50	100
Color	Flu.Green	Flu.Green	Flu.Green	Flu.Green	Flu.Green
Appearance	B&C	B&C	B&C	B&C	B&C
Density @ 20 °C, g/cm <sup>3</sup>	1.01	1.04	1.05	1.07	1.09
pH (50% vol. in water)	7.2	7.2	7.4	7.5	7.6
Reserve Alkalinity	3.2	3.4	3.4	3.6	4.2
Freezing Protection °C	-15	-20	-27	-36	-18
Mono Ethylene Glycol Concentration, %	29.3	31.9	39.1	49.1	96

## GLÄT EP0, EP1, EP2 EXTREME PRESSURE LITHIUM GREASE

**Petrovöll GLÄT EP** is a friction-reducing lithium soap grease that contains oxidation, rust & corrosion inhibitors and provide excellent extreme pressure properties. It exhibits effective resistance to bleeding, superior resistance to water wash out and makes use of a load carrying additive system that contains no lead or metals that are environmentally undesirable.

### APPLICATIONS

- For lubrication of plain and rolling element bearings in normal to heavy-duty industrial applications
- Performs admirably in aqueous environments due to high resistance to entry of water
- Its softer grades are particularly suitable for use in centralized lubrication systems and can be used for both automotive and industrial applications
- Wide operating range of -30 to 120 °C



### BENEFITS & ADVANTAGES:

- Offers excellent film thickness with outstanding resistance to oxidation
- Excellent pressure absorption capacity
- Good mechanical & thermal stability and maintains consistency
- Exceptional corrosion protection and anti-rust properties
- Wide operating temperature range with specifications of high temperature resistance
- Very good resistance to water and excellent low temperature properties

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS		
NLGI grade	EP 0	EP 1	EP 2
Kin. Viscosity @ 40 °C, cSt	148	150	170
Penetration @ 25 °C	355 - 385	220 - 250	265 - 295
Dropping Point °C, Min	190	190	190
4-ball Scar mm	0.5	0.5	0.5

## GLÄT EP2, EP3 LITHIUM COMPLEX GREASE

Petrovöll **GLÄT EP Lithium Complex** is a premium lithium complex grease formulated with a high dropping point to ensure retention where high temperatures are encountered. It is blended with a special additive package, which provides high film strength and extreme pressure (EP) & anti-wear properties. Its high quality virgin base oil provides excellent natural oxidation inhibition, which when combined with effective anti-oxidants as well as corrosion inhibitors; provide extra stability under storage and extreme service conditions.



### APPLICATIONS

- Recommended for severe applications where good high temperature and anti-leakage properties are required and for construction & mining equipment, paper and steel mills and other heavy-duty applications
- Designed to resist water wash out, water ingress, corrosive environments, shocks and vibrations
- Effective temperature range from -15°C to 160°C
- Suitable for heavy load bearing
- Offers excellent film thickness

### BENEFITS & ADVANTAGES:

- Good mechanical & thermal stability and maintains consistency
- Extended intervals between re-lubrication due to long product life even under severe operating conditions
- Wide operating temperature range
- Excellent resistance to water wash out and contamination

### SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS	
NLGI grade	2	3
Color, Visual	Dark Blue	Dark Blue
Kin. Viscosity @ 40 °C,cSt	210	210
Penetration @ 25 °C	280	235
Dropping Point °C	275	280
4-ball Scar mm	0.6	0.6
Timken OK Load,kg	20	19
Copper strip Corrosion	1B	1B

# GLÄT MULTI PURPOSE GREASE CALCIUM BASE

**Petrovöll GLÄT Multi-Purpose Grease** is a calcium-thickened general-purpose grease formulated to provide excellent lubrication and protection from wear. Based on best calcium chemistry, it is the finest grease with antirust and corrosion inhibiting additives. Its wide range of applications includes use on automotive wheel bearings where it can operate at extremely high temperature. It also offers exceptional performance at high temperature while maintaining excellent structural integrity & adhesion and is also resistant to ingress from water.



## APPLICATIONS

- Exceptional performance in applications operating at high temperatures and pressure
- Performs admirably in aqueous environments due to high resistance to entry of water
- Optimum protection for axles, bearings and rings
- Offers excellent film thickness

## BENEFITS & ADVANTAGES:

- Very good flow ability with wear protection properties
- Good resistance to oxidation
- Increased pressure absorption capacity
- Good corrosion protection and resistance to water

## SPECIFICATIONS & TECHNICAL PARAMETERS

TESTS	RESULTS	
NLGI grade	2	3
Color, Visual	Brown	Brown
Thickener Type	Calcium Soap	Calcium Soap
Kin. Viscosity @ 40 °C,cSt	72	72
Worked @ 60 stroke,@ 25 °C	275	235
Oil Separation (24 hours)	2.3	2.0
Dropping Point °C	190	195

## PETROVÖLL FUEL INJECTOR CLEANER

**Petrovöll Fuel Injection Cleaner** for petrol engines removes carbon deposits from the fuel injectors and intake valves & ports, and protects these key engine parts to maximize engine performance and fuel economy. It also greatly improves cold start performance, as well as fuel stability.

### BENEFITS & ADVANTAGES:

- Cleans, restores and protects the entire fuel system (fuel injectors, carburetors, intake valves and combustion chambers)
- Prevents fuel system rust and cleans intake valve and ports deposits
- Eco-friendly with lesser toxic emissions
- Reduces rough idle, engine surge, hesitation, and spark plus fouling
- Maximizes performance & fuel economy and provides better gasoline mileage for your cars



## PETROVÖLL DIESEL INJECTOR CLEANER

**Petrovöll Diesel Injector Cleaner** is an additive designed to provide effective cleaning of diesel injectors and combustion chambers and to improve diesel fuel quality and combustion. It comes with improved efficiency in removing the carbon deposits and has the ability to remove the toughest deposits to leave your internal parts cleaned. As a result, you will have an efficiently running car with lower emissions, smoother idle and enhanced cold start- up.

### BENEFITS & ADVANTAGES:

- Cleans the entire diesel fuel system
- Improves the combustion and facilitates cold starting
- Reduces diesel-knocking noises
- Reduces black exhaust smoke
- Cleans and lubricates injectors and fuel pump
- Protects the entire fuel system against rust and corrosion
- Harmless for all after-treatment systems



## PETROVÖLL COMPLETE FUEL SYSTEM CLEANER

**Petrovöll Complete Fuel System Cleaner** cleans the direct and port/indirect fuel injectors, intake valves & ports, piston tops, cylinder heads and combustion chamber, preventing the fuel to leave behind carbon deposits and corrosion from ethanol and water. It also conditions the fuel against corrosion to help extend the life of key engine parts, maximizing their performance and fuel economy.

### BENEFITS & ADVANTAGES:

- Reduces fuel consumption by removing deposits in the fuel injector
- Prevents internal components against corrosion and removes the toughest stains
- Improves engine performance by cleaning carbon deposits and lubricates the internal components
- Boosts cold weather flow and reduces emissions



## PETROVÖLL OCTANE BOOSTER

**Petrovöll Octane Booster** acts as a premium fuel additive designed to increase its octane number. It is suitable for all petrol injection systems and raises the octane count by up many points, depending on the fuel quality. It also protects the engine by preventing deposits in the valves, combustion chambers or exhaust gas recycling valves, ensuring a better start behaviour and safe full-load operation, as well as steady and softer idling. Additionally, it protects unhardened valve seats if lead-free fuel is used. Regular use will ensure that the engine runs at peak performance for a long time and will protect your catalytic converters from phosphorous poisoning. This product will help to restore lost horsepower and also improve anti-lock effectiveness.



### BENEFITS & ADVANTAGES:

- Highly effective anti-knock compound
- Protects against negative effects of ethanol
- Ensures even and soft idling
- Safe for all gasoline engines
- Improves engine performance and ensures faster acceleration capacity
- Optimized for vehicles with catalytic converter
- Prevents corrosion and improves emission values
- Reduces deposits in combustion chambers
- Compatible with exhaust gas after treatment systems
- Protects valve seats from excessive wear if lead-free fuel is used

## PETROVÖLL OIL TREATMENT

**Petrovöll Engine Oil Treatment** provides conventional motor oils with anti-wear additives like zinc and phosphorus that are necessary to protect against camshaft and valve train damage on break-in. This product is designed to allow piston rings to seat properly, while allowing other engine components to avoid excessive wear. It also effectively removes the black sludge in the crankcase, oil screens, oil passages, rocker arms and other critical areas of the engine.

**Petrovöll Engine Oil Treatment** is recommended to be used with conventional and synthetic oils during regular operation, providing an extra package of protection. It decreases metal to metal contact, thereby boosting the engine performance and increasing the start up performance with less chatter.

**Petrovöll Engine Oil Treatment** fortifies all qualities of engine oil, providing superior, long-lasting engine protection, maintains peak engine performance and prevents engine oil oxidation and thickening under even the most intense driving conditions.



### BENEFITS & ADVANTAGES:

- Reduces the metal-to-metal surface friction at the engines
- Repairs piston ring seals and prevents corrosion
- Controls temperature performance and increases oil life
- Smoothens engine start-up and reduces the noise
- Minimizes harmful emissions
- Reduces the oil consumption rate and Increases overall mileage (MPG)

## PETROVÖLL OIL STOP LEAK

**Petrovöll Oil Stop Leak** additive is non-solvent chemical formula that reduces oil consumption that arises from brittle and cracked seals in the engine. It regenerates old, hardened and brittle seals made of elastomer, plastic and rubber and allows these to become pliable again, reducing oil consumption on seals from shaft seal rings, valve covers, valve shafts and other seals.



### BENEFITS & ADVANTAGES:

- Revitalizes rubber and neoprene seals of crankshaft, camshaft and valve stem
- Reduces oil consumption of petrol and diesel engines
- Conditions and restores gaskets and seals
- Suitable for turbocharged engines, catalytic converters and diesel particulate filters
- Reduces engine noise

## PETROVÖLL CARBURETOR AND CHOKE CLEANER

**Petrovöll Non-Chlorinated Carburetor and Choke Cleaner** quickly removes deposits from the inside and outside of the carburetor to improve engine performance and fuel economy and reduce emissions. It also effectively cleans all non-painted metal parts and surfaces, helps dissolve gum, varnish, dirt and carbon deposits and assures smoother idling and faster starts. An extension spray tube is included for those hard to reach areas. This product is not recommended for fuel-injected vehicles.

### BENEFITS & ADVANTAGES:

- Better fuel efficiency with production of more power
- Fast-acting cleaner gives you quick results
- Safe for use with most metals, plastics, and rubber
- Works on gum, oil, hard carbon, varnish & sludge
- Improves acceleration and faster engine starts

## PETROVÖLL ENGINE FLUSH

**Petrovöll Engine Flush** is made with a special formulation to flush out engine-destroying sludge, deposits, and contaminants that decrease the power and efficiency of the engine. It also removes accumulated gums, varnishes, and sludge from internal engine parts and releases sticky valves and piston rings. Moreover, this product also helps restore your vehicle's lost performance to a greater extent and is the perfect solution for improved performance for any non-turbo gasoline engine.

### BENEFITS & ADVANTAGES:

- Cleans engine in 5 minutes
- Increases operating efficiency of the engine
- Frees sticky valves, piston rings, and lifters
- Improves anti-friction and anti-wear capability
- Low friction ensures extended life of the oil
- Improves fuel efficiency

# PROPER HANDLING AND STORAGE OF LUBRICANTS

## UNLOADING and HANDLING

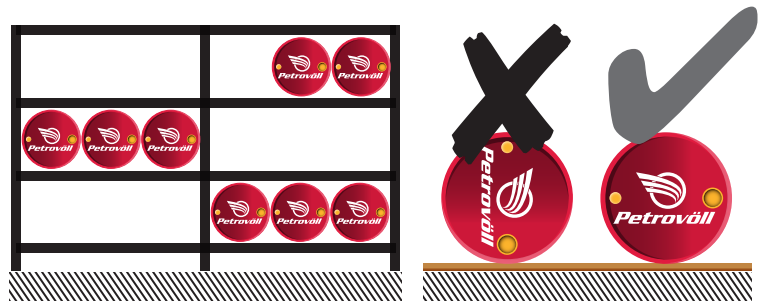
Use a forklift when unloading drums from the truck. If no forklifts are available, use wood or metal ramp and carefully roll the drums to the ground.



## INDOOR STORAGE

Drums: Four drums for every pallet, maximum 2 pallet high.

When stored horizontally, the openings (plugs) should be in the 9 and 3 o'clock position.



## OUTDOOR STORAGE

Outdoor storage is not recommended, but if necessary, ensure that the surface you put it on is sealed.

Use storage racks or wooden wedges to place the drums on its side.





**GERMANY**

t: +49 201 319377074  
Huttroperstraße 60, 45138  
Essen, Germany.



[www.petrovoll.com](http://www.petrovoll.com)