

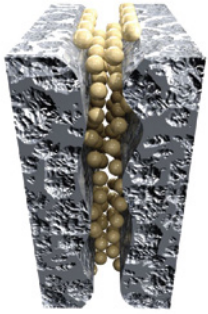
## Nano<sup>n</sup> Lubricants High Performance Series

### Breakthrough in Engine Oil Industry, Long Life and Superior Performance

Formulated for Excellent Performance and Durability. Double ester and PAO blend with high quality base stock with proprietary friction modifiers and organic anti-wear additives. High Performance provides excellent cost performance protection under high performance applications, high temperature environments for daily to sports car applications. Proprietary viscosity modifiers and high quality synthetic base oil ensure stable high temperature performance and superior low temperature properties.

### Superior Anti-Wear Formulation

Racing and high-performance engines are typically modified to deliver maximum horsepower and speed. Their powerful designs create shearing forces that can cause lesser oils to lose viscosity, leaving bearings, pistons and other components vulnerable to wear and failure. Nano<sup>n</sup> Lubricants use a special synthetic organic anti-wear technology resists of operating high temperature up to 250°C. This long lasting nano particle is proven long lasting until engine oil end of service life.



Very small organic particles forms roller film protective layer between rough surfaces, filling up gaps and cracks on worn surfaces

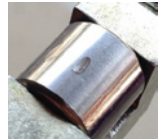


**Left** 10 minutes of non stop Timken experiment high load 200°C high temperature results of Nano<sup>n</sup> Lubricants

**Right** Timken test result of traditional MoS<sub>2</sub> and ZDDP based technology under light load testing



**Right** Same Timken experiment is performed on metal piece after engine oil after six-month and 15,000km of service. (2010 Honda Civic 1.8, Extreme 0W-30 is being tested)



### Super Low Friction

Organic anti friction and anti-wear components, Nano<sup>n</sup> Lubricants reduces friction, provides cooler engine temperatures, long lasting, maximum stability in high temperature working condition. Less friction translate into higher engine torque output.

### Maximum Power Output

Formulated by a special proprietary viscosity modifier, Nano<sup>n</sup> Lubricants out performs normal engine oil durability and viscosity stability control. Super low drag by maximum oil flow capabilities, stable viscosity ensure stable and maximized engine output with stable high cylinder compressions.

### Protection from Startup to Endurance Race Finish

Excellent cold temperature anti-wear performance, extreme low pour point with extra high HTHS (High-Temperature/High-Shear) viscosity at elevated operating temperatures maintains superior film strength. Nano<sup>n</sup> Lubricants shows thermally stable synthetic chemistry resists the effects of intense heat which common to racing engines.

### Superior Engine Cleanliness

Double ester base oil provides excellent detergency properties that keeps your engine clean and healthy. Prevent sludge and varnish deposits, reduced oil and fuel consumption, extends engine life and provide maximum performance.

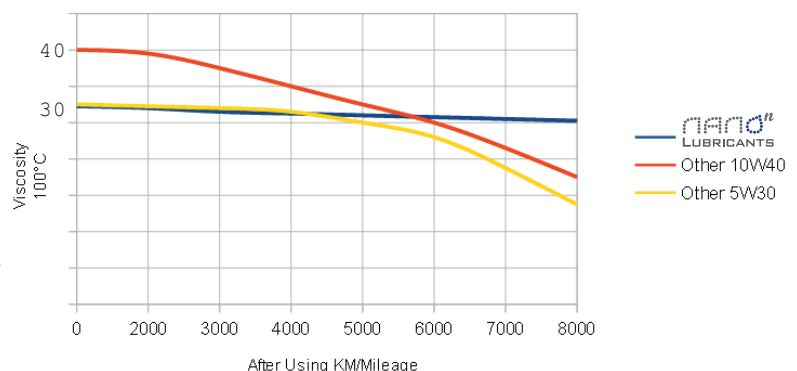
### Extended Oil Drain

Both superior low temperature and high temperature performance enables Nano<sup>n</sup> Lubricants High Performance series use on daily driving and sports driving. Its superior synthetic chemistry allows high performance operations with extended oil drain. Extreme low evaporation loss catered for high temperature operated engines to minimize oil loss.

### Extended Performance Lifetime

ProPioneer's proprietary high performance viscosity modifier, in combination with genuine synthetic base blends with quality base stock, High Performance series oil performs exceptionally stable in high temperature high shear conditions with long life anti-oxidation capabilities. Synthetic esters extends oil seal life time and keep engine clean, sludge free, free flow oil channels, ensure engine hydraulic components works reliably under engine life time. Oil performs like new even after thousands of kilometers of severe service operations. This feature enables engine output and efficiency to maximum from start to end of oil service life time.

Viscosity vs Mileage



Above information refer to typical scenario. In reality, the actual degrade of viscosity depends on fuel quality, engine conditions, driving behaviour and whether conditions.

## Typical Technical Properties

	10W20	10W30	10W40	10W50	15W40	15W50	15W60
Kinematic Viscosity @ 40°C , cSt(ASTM D445)	42.0	65.6	90.52	113	97	120	145
Kinematic Viscosity @ 100°C , cSt(ASTM D445)	9.0	12.1	15.7	19.0	15.5	19.0	23.0
Viscosity Index (ASTM D2270)	172	174	185	189	170	179	189
CCS, mPa.s (°C) (ASTM D5293)	4500(-25)	4800(-25)	5000(-25)	5500(-25)	4500(-20)	5000(-20)	5500(-20)
Flash Point °C (ASTM D92)	>230	>230	>235	>240	>240	>240	>240
Pour Point °C (ASTM D97)	-40	-40	-40	-45	-40	-40	-40
Noack Volatility, %weight loss (ASTM D5800)	<7.5	<7.5	<8.5	<9.5	<8.0	<8.5	<9.5
Total Base Number (ASTM D2896)	8.0	9.1	9.3	11.0	11.0	11.0	11.0
High Temperature/High-Shear Viscosity (ASTM D5481)	>2.9	>3.5	>4.0	>4.8	>4.0	>4.8	>5.5
Sulfated Ash, %weight (ASTM D874)	<0.85	<0.85	<1.2	<1.2	<1.2	<1.2	<1.5

## Meets or Exceeds following requirements

Due to difference viscosities of oil meets different requirements and standards, not all oil meets the same API/ACEA/Manufacturer requirements.

### 10W20

API SN/CF  
ACEA A1/B1  
GM Dexos1, GM6094M, Ford WSS-M2C947-A

### 10W30

API SN/CF  
ACEA A3/B4  
MB 229.3/229.5, VW 502/505

### 10W40

API SN/CF  
ACEA A3/B4  
MB 229.1/229.3, VW 502/503.01/505

### 10W50

API SN/CF  
ACEA A3/B4

### 15W40

API SN/CF  
ACEA A3/B4

### 15W50

API SN/CF  
ACEA A3/B4

### 15W60

API SN/CF  
ACEA A3/B4

## Applications

Designed for heavy duty performance driving with extended oil life. Suits high performance sports car, race modified engines, high temperature working conditions. Works on high speed naturally aspirated engines and turbocharged engines, gasoline, 4 stroke motorcycles with dry clutch systems, LPG or diesel, hybrid vehicles. Consult your engine builder and service manual for recommended oil weights and types.

## Service Life

Normal Service - 25,000KM, 800 hours of operation or one year  
Severe Service - 8,000KM, 400 hours of operation or six months

## Warranty

All users of PPE Nano<sup>n</sup> Lubricants subject to be covered by limited product warranty. Please see <http://www.propioneer.co/engine-oil-warranty> for detail terms and conditions

## Compatibility

Nano<sup>n</sup> Lubricants is compatible with conventional and synthetic engine oils. However, mixing with other engine oil will shorten the oil's expected life time and reduce in performance benefits. ProPioneer Engineering does not guarantee performance viscosity properties where mixing with other oil.

Aftermarket additives are not recommended for use with Nano<sup>n</sup> Lubricants