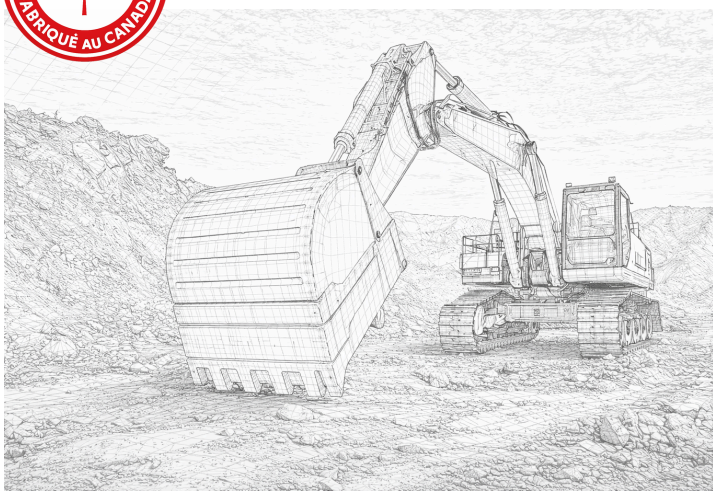
HydroSyn PAO 520

Synthetic AW Hydraulic Fluid



Synthetic Strength for Relentless Hydraulics

MicroLub HydroSyn PAO 520 is a premium, synthetic anti-wear hydraulic fluid formulated with high-performance PAO base oils and a balanced additive system providing outstanding oxidation stability, wear protection, and corrosion resistance. It is engineered for severe-duty industrial hydraulic systems operating under high loads, wide temperature variations, and extended service intervals.

HydroSyn PAO 520 delivers reliable lubrication, clean system operation, and long oil life, significantly outperforming conventional mineral-based hydraulic oils in demanding environments.

Stable Lubrication Across Wide Temperature Ranges

The high viscosity index of MicroLub HydroSyn PAO 520 reduces the rate of viscosity change with temperature, ensuring stable hydrodynamic lubrication and consistent film thickness over a wide operating temperature range. This contributes to reliable pump efficiency, controlled system response, and effective component protection under both low- and high-temperature operating conditions.

Exceptional oxidation and thermal stability

Excellent oxidation and thermal stability enable MicroLub HydroSyn PAO 520 to resist degradation under prolonged exposure to heat, oxygen, and system contaminants. This minimizes acid formation, sludge, and varnish deposits, maintaining fluid cleanliness and performance. As a result, extended drain intervals are achievable, subject to operating conditions and routine oil analysis.

MicroLub HydroSyn PAO 520 demonstrates oxidation resistance exceeding 18,000 hours under modified ASTM D943 test conditions. This high level of stability indicates strong resistance to thermal and oxidative degradation, helping to maintain fluid cleanliness and performance over extended operating periods. Actual service life depends on system design, operating conditions, and maintenance practices, with oil analysis recommended.

superior rust and corrosion protection

MicroLub HydroSyn PAO 520 provides superior rust and corrosion protection in humid and wet environments through a carefully balanced inhibitor system. It effectively protects ferrous and non-ferrous metal surfaces from moisture-induced corrosion, minimizes surface oxidation during shutdown periods, and maintains component integrity in hydraulic systems exposed to water ingress, condensation, or high ambient humidity.

Applications.

- Industrial hydraulic systems operating under high pressure and temperature
- Cement plants, including crushers, mills, and kiln auxiliary hydraulics
- Steel mills and aluminum processing facilities
- Mining and quarry equipment hydraulic systems
- Port cranes and material handling equipment
- Paper machines and pulp processing hydraulic systems
- Injection molding and hydraulic press systems
- Mobile and stationary construction equipment
- Vacuum pumps and circulating oil systems
- Elevators and lifts in high-rise buildings

Elevator / Lift Applications in Middle East

MicroLub HydroSyn PAO 520 is suitable for hydraulic elevator systems operating in high ambient temperature environments. Its high viscosity index helps maintain stable viscosity and consistent hydraulic pressure at elevated temperatures, supporting reliable lift speed, smooth operation, and controlled valve response. This reduces performance loss commonly experienced with conventional hydraulic oils in hot climates.

Excellent air release and foam suppression for smooth hydraulic response

Excellent air release and foam suppression characteristics allow MicroLub HydroSyn PAO 520 to rapidly separate entrained air and resist foam formation during operation. This minimizes fluid compressibility, promotes stable pressure transmission, and ensures smooth, precise hydraulic response, contributing to reliable system control and reduced noise, vibration, and operational irregularities.

Typical Properties

Grade ISO	22	32	46	68	100
Viscosity (cSt@40C) (ASTM D445)	21.5	29.3	41.5	63.5	97.2
Viscosity (cSt@100C) (ASTM D445)	4.8	5.8	7.3	9.9	13.5
Viscosity Index (ASTM D2270)	151	145	141	140	139
Flash point©	202	210	214	222	225
Flow point © (ASTM D97)	-65	-49	-40	-42	-35
Specific severity (g/ml)	0.85	0.85	0.86	0.87	0.87
Oxidation resistance (Modified ASTM D943)	> 18,000 hours				
Charge Timken OK(kg)	30	30	30	32	32
Damae floor FZG (DIN 51354;2nd part)	>12	>12	>12	>12	>12
Shelf Life (Months)(Storgae of sealed drums)	>60				
Colour	Blue				

Meets or Exceeds

Vickers 1-286-S, M-2950-S

Denison HF-1, HF-2, HF-0

Racine, variable volume vane pumps

Jeffery #87

Ford M-6C32

Racine, variable volume vane pumps

BF Goodrich 0152

GM LH-04-1, LH-06-1, LH-15-1

DIN 51524 part 2 Commercial Hydraulics)

AFNOR E 48-603

Lee-Norse100-1

US Steel 136, 127

Cincinnati Milacron P-68, P-69, P-70

PERFORMANCE SUMMARY ISO 68		
Rotary Bomb (minutes to 25psi loss)	ASTM D2272	300
Oxidation of tubine oil (hours to 2.0 TAN)	ASTM D943	2700
Corrosion of sluge and metals(1000h)	ASTM D4310	
insoluble sluge(mg)		28
Total Cu(mg)		1.3
Total Fe(mg)		1.1
Thermal stability (18h,135C,Cu-FE Catalyst	Cincinnati-Milacron	
mud(mg/100ml)		15
Condition du Cu Rod (SM colour class)		3
Condition du Fe Rod (SM colour class)		2
Copper corrosion	ASTM D130	1a
Turbine oil rust test	ASTM D665	
(a) Distilled water		pass
(b) Synthetic seawater		pass
Acid level (TAN)-New oil (mg KOH/g)	ASTM D974	0.15
Foam test 1/2/3	ASTM D892	0

Storage

- Store in a cool, dry, and well-ventilated area, away from direct sunlight, heat sources, and open flames.
- Keep containers tightly sealed when not in use to prevent contamination with dust, water, or other foreign materials.
- Do not store near oxidizing agents, strong acids, or alkalis.
- Recommended storage temperature: 5°C to 40°C (41°F to 104°F).
- Protect from freezing and excessive heat; avoid prolonged exposure above 50°C (122°F).
- Rotate stock on a first-in, first-out (FIFO) basis to ensure product quality and shelf life.
- Shelf life: 36 months in unopened original packaging under recommended storage conditions.

Pack Size : 20L Pails, 60L Kegs, 200L Drums, 1000L Totes