



Monolec® Paper Machine Lubricant (6200-6190-6140)

Long-Lasting Oil Prevents Rust, Corrosion, Plugging & Wear

Monolec® Paper Machine Lubricant is a high-performance paper machine oil specifically formulated to provide thermal oxidation stability and rust and corrosion protection for long oil life. Its detergency prevents carbon deposit buildup and coking to minimize oil system plugging and premature bearing failures. It also provides excellent wear protection, thanks to Monolec, LE's proprietary wear-reducing additive. Available in three viscosity grades, it is ideally suited for paper machine circulating systems and shoe press applications.

Beneficial Qualities

Performance

- Ensures long oil life
- Prolongs equipment life
- Minimizes unscheduled downtime

Oxidation, Rust & Corrosion Prevention

- Achieves precipitate values 15% lower than commercial paper machine oils in Thermal Stability of Hydraulic Oils Test (ASTM D2070)
- Resists oxidation 20-25% better than commercial paper machine oils
- Prevents buildup and minimizes deposits caused by exposure to steam heat
- Separates rapidly from water, allowing excess water to accumulate for easy drain-off
- Protects against rust and corrosion

Long-Lasting Wear Protection

- Has smaller scar diameter in Four-Ball EP test when compared to commercial paper machine oils
- Is easily filtered for long-term oil cleanliness, without loss of additive package



Proprietary Additive

LE's proprietary additives are used exclusively in LE lubricants. Monolec Paper Machine Lubricant contains Monolec.

Monolec® wear-reducing additive creates a single molecular lubricating film on metal surfaces, vastly increasing oil film strength without affecting clearances. An invaluable component in LE's engine oils, industrial oils and many of its other lubricants, Monolec allows opposing surfaces to slide by one another, greatly reducing friction, heat and wear.



Monolec® Paper Machine Lubricant

	<u>6200</u>	<u>6190</u>	<u>6140</u>
Color	Red	Red	Red
ISO VG	150	220	320
Relative Density @ 60°F/60°F, ASTM D1298	0.886	0.886	0.886
Viscosity @ 100°C, cSt, ASTM D445	14.90	19.30	24.55
Viscosity @ 40°C, cSt, ASTM D445	155.0	230.2	335.1
Viscosity Index ASTM D2270	95	95	95
Flash Point °C (°F) (COC), ASTM D92	262 (504)	268 (515)	268 (515)
Pour Point °C (°F), ASTM D97	-12 (10)	-12 (10)	-12 (10)
Rust Test 4 hrs @ 60°C, DI H₂O, ASTM D665A	Pass	Pass	Pass
Rust Test 4 hrs @ 60°C, Sea H₂O, ASTM D665B	Pass	Pass	Pass
Copper Corrosion 3 hrs @ 100°C, ASTM D130	1a	1a	1a
Oxidation by RPVOT @ 150°C, minutes, ASTM D2272	250	263	253
Four-Ball EP Weld Point, kgf, ASTM D2783	200	200	200
Four-Ball Wear @75°C, 1200 rpm, 40 kgf, 60 minutes, mm wear, ASTM D4172	0.40	0.37	0.40
Emulsion Characteristics @82°C, oil-water-emulsion/minutes, ASTM D1401	40-40-0/10	40-40-0/10	40-40-0/10
Air Release >90.0 cSt @ 40°C: 75°C, minutes, ASTM D3427	–	10.77	–

Typical Applications

- Paper machine circulating systems
- Shoe press applications

