



AR9100 Industrial Friction Modifier & System Cleaner

Archoil's patented potassium nanoborate lubrication technology was developed as a solid boundary lubricant to replace outdated and toxic anti-wear additives common in today's lubricants

Boron lubrication technology was initially developed at the Argonne National Laboratory for the US Dept. of Energy. From this research AR9100 was developed, a combination of nanoborate and complex fatty acid esters which liquefy all deposits in the fluid system – carbon, varnish and sludge allowing for the Nanoborate solid boundary layer to chelate to the deposit free host alloy, filling in all asperities, and creating a high load surface as an extreme pressure agent. Boron is known for its hardness and commonly compared to diamond.

AR9100's base is composed of 4 complex organic esters which are formulated to clean all deposits and facilitate the migration of the protective boron nanoparticles to surface metal.

AR9100's surface friction coefficient tests at 0.037. It is far more lubricious than traditional lubrication oils, and it is capable of bearing loads many times that of other solid boundary lubricants.

AR9100 is highly concentrated. Dilute in mineral or synthetic lubrication oil as directed for the specific application.

FEATURES / BENEFITS

- 🔥 Reduces surface friction 60-80%
- 🔥 Reduces operating energy requirements
- 🔥 Increases horsepower
- 🔥 Reduces fluid system wear up to 75%
- 🔥 Minimizes fluid oxidation- extends the oil drain cycle / reduces downtime
- 🔥 Reduces operating temperatures up to 30% - 40%
- 🔥 Inhibits corrosion
- 🔥 Extreme Pressure agent -absorbs shock loads of up to 4000 lbs
- 🔥 Cleans out pre-existing carbon, sludge and varnish build up
- 🔥 Reduces emissions
- 🔥 Biodegradable and non-toxic
- 🔥 Reduces noise and vibration
- 🔥 Eliminates HEUI injector stiction due to varnish and carbon

SPECIFICATIONS

Color.....	Brown liquid
Base Fluid.....	Fatty acid esters
Viscosity.....	150 SUS at 100°F
Specific Gravity	1,000 at 25°C
Nano variants.....	Nanoborate (proprietary processing)
D.O.T.	Unregulated
V.O.C.	None
Biodegradable	Yes

SUMMARY OF TEST RESULTS

Falex Pin & Vee Test ASTM D-3233

(3.5% in 100 neutral mineral oil):

Load	3750
Torque	47
COF	0.037 (<i>coefficient of friction</i>)

APPLICATION

- Autos/trucks, boats, new and used treat at 28.5 to 1, 1.2 oz per quart
- Motorcycles wet clutch or not 1.2 oz per quart
- Gear oil treat at 10-1, 3.2oz per quart
- Hydraulic oil treat at 10-1, 3.2oz per quart
- Automatic transmissions treat at 3oz per gallon
- Power steering system 1oz
- Slip differentials 1oz per quart

TREATMENT

Use at every oil drain to maintain optimum performance, minimal wear, reduced emissions and cleaner oil.

PACKAGING

8 oz. / 236ml bottle
16 oz. / 473ml bottle
32 oz. / 946ml bottle
1 gallon / 3785ml bottle
5 gallon pail
55 gallon drum