



## MAGNETIC HEAD LAPPING LUBRICANTS

Lapping lubricants for magnetic sliders can dramatically affect surface finish, PTR, smearing, sensor corrosion, lapping removal rates and the lapping plate life. The ideal lapping lubricant is easy to clean as well as it provides a cleaning action to either the lapping plate or the lapping film surface. Suspending the grinding swarf is the key to increasing cut rates and for more stable and improved lapping plate life. The basic concept is that the lubricant has a strong affinity to the grinding swarf and the lapping plate or lapping film. An additional characteristic of the lubricant is that it produces a highly charged surface coating on the lapping plate or swarf; the result is that the grinding swarf has a strong repulsion to the lapping

### Metal Lapping Plate Lubricants

Feature	ENGIS L6037	DIALUBE L7000	DIALUBE 9G-A
Carrier	Ethylene glycol	Ethylene glycol	Glycerin
Surface Tension	32.57 dynes/cm	32.58 dynes/cm	32.60 dynes/cm
Viscosity	12.5 cps	12.5 cps	User defined 10-50 cps
Wetting angle			
Tin lapping plate	9 degrees	9 degrees	8 degrees
Bismuth/tin plate	Complete wetting	Complete wetting	3 degrees
Zinc lapping plate	9 degrees	9 degrees	13 degrees

plate and other grinding particles. This strong repulsion keeps the grinding swarf from settling and packing into the grinding surface, thus keeping the diamond grinding particle open for enhanced grinding.

**DIALUBE 9G-A lapping lube** – is a lapping lubricant specifically designed to replace ethylene glycol based lapping lubricants. It has been demonstrated to produce higher cut rates with the added feature of reducing metal corrosion as compared to the present surfactant modified ethylene glycol lubricants.

**DIALUBE L7000 / L7500 lapping lubes** are lapping lubricants specifically designed to replace the Engis L6037 lapping lube. The DIALUBE L7000 and L7500 lapping lube are low surface tension, high wettability ethylene glycol based lapping lubricants. The DIALUBE L7000 has a viscosity of 12.5 cps, whereas the DIALUBE L7500 has a viscosity of 25 cps which is especially useful for eliminating the vibration during lapping of the smaller form factor bars. The surfactant component for both these lubricants is widely used for the extremely tight tolerance surface finishing requirements for the semiconductor industry.

**DIALUBE 3000 diamond lapping film lube** – is specially formulated glycerin based lapping lubricant for use with diamond lapping films. The

DIALUBE 3000 lapping lube coats the AITC grinding swarf particles and keeps them in suspension, thus preventing build-up on the diamond particles. The result is a 10-50 times improvement in the life of the diamond lapping films

**DIALUBE OL-7000 oil-based lapping lubricant** – is specially formulated light mineral oil for cleaning and lubricating the final and kiss lapping plates used for finishing magnetic read-write heads. The viscosity range of the DIALUBE OL-7000 can be engineered between 15 cps and 35 cps, depending upon the lapping machine requirements

**DIALUBE L7000**  
Ethylene glycol lube  
Alternative to Engis L6037  
Metal lapping plate lube

**DIALUBE 9G-A**  
Non-ethylene glycol lube  
Anti-corrosion additive  
Metal lapping lube

**DIALUBE 3000**  
Non-ethylene glycol lube  
diamond lapping film lube

**DIALUBE OL-7000**  
Light-oil based lapping  
lubricant

