

Almasol

ALMASOL® 'The Protective Edge' reduces friction, heat & wear and resists chemical attack while withstanding high loads and temperatures to 1,038°C (1,900°F) It has been used on every manned US Space mission due to its incredible capabilities. [more info]

What is ALMASOL®?

- LE's exclusive 'wear reducing' agent
- Highly refined (1-2 microns) solid, dry-film lubricant derived from Aluminium, Magnesium & Silicate
- ALMASOL® particles are so small that 8,000 would cover this full stop.
- Soft tan powder with huge load carrying characteristics, resists acid attack & retains these up to 1,038°C

What does ALMASOL® do?

- Reduces FRICTION, HEAT & WEAR in bearings , gearboxes, gears & chains

How does ALMASOL® work?

- ALMASOL® particles attach to all metal surfaces in single, micro-scopic layers, thereby preventing destructive metal-to-metal contact
 - ALMASOL® layer acts like a 'protective glove' around all moving parts, providing almasol-to-almasol contact, resistance to acid, less friction, heat & wear
 - ALMASOL® carries heavy loads of up to 400,000 psi providing complete protection against shock loads
 - ALMASOL® will not build on itself or affect machine tolerances
- How does ALMASOL® perform?
- Wear Reducing protection: In FZG Test LE607 Almasol® Gear Oil had 138 - 263% less wear than other commercial gear oils
 - EP Lubrication: In case of load increase / speed decrease
 - Reduces Friction & Energy: Provides smooth, low drag surface & reduces heat

ALMASOL®

MOLYBDENUM DISULFIDE (MoS₂)

GRAPHITE

FLUOROCARBON (PTFE) Maximum Service Temperature

1038°C

1900°F

343°C

650°F

426°C

800°F

260°C

500°F Load Carrying Capacity, psi

400,000 400,000 80,000 5,000 Lubrication Mechanism

Slippage between particles Shearing of molecular bonds Slippage between particles

Polymer alters orientation

Acid resistance

Inert

Some - cannot tolerate hydrochloric acid, nitric acid, fluorine, chlorine, pure oxygen

Inert

Comments

Has a natural affinity to metal as a result of surface attraction. Will not build on itself or affect machine tolerances.

Oxidises in air above 343°C to form molybdenum trioxide which is abrasive. Tendency to build on itself & affect close tolerances. Cannot tolerate hydrochloric acid & nitric acid, which are often present in lubricant environments especially where heat, water & air are present

Galvanic corrosion problems. Tendency to build on itself.

No load-carrying capacity. Tendency to build on itself.

