



AR2500 Nano WS₂ Parts Assembly Lube

AR2500 is a multipurpose; nano tungsten disulfide (WS₂), parts assembly lube. WS₂ is one of the most lubricious substances available. It offers far superior performance to molybdenum, graphite, Teflon® or boric acid in every application. **AR2500** lubricant penetrates and bonds to metal surfaces. The lubricating, micro thin film features an ultra-low coefficient of friction (0.03 dynamic; 0.07 static) that prevents sticking and wear. It is ideal for sliding mechanisms and heavy load lubrication environments such as equipment or engine building.

AR2500 can also be used in high temperature and high pressure applications. It offers temperature resistance from -450° F (-270° C) to 1200° F (650° C) in normal atmosphere and from -350° F (-188° C) to 2400° F (1316° C) in vacuum conditions. The load bearing ability of the treated surface is extremely high at over 300,000 psi.

FEATURES/BENEFITS

- WS₂ is chemically inert
- High temperature lubrication
- Very high load properties
- Practically creates a frictionless surface
- Excellent penetrating abilities
- Prevents galling, seizing or cold-welding
- Long lasting
- Ideal for preassembly applications
- Fills in surface asperities creating a very smooth and hard surface
- Dramatically reduces wear
- Additive for cutting fluids, gear, engine and hydraulic fluids, etc.
- Ultra-thin coating (0.05 microns)
- Suitable for high precision components
- Excellent release properties – non-stick
- Non-toxic
- Mold release is 100% lubricity throughout
- Excellent release material for plastic molds, extrusion dies, etc.
- No curing time or heat required

WS₂ RESULTS FOR TREATING PARTS

Applications	Functional Area	Operational Conditions	Achieved Results
Pins, pinions, gears, bearings	Fractional H.P. motors	Photocopier drives	Eliminated conventional lubricant. Doubled wear life of parts
Piston, piston block, springs	Hydraulic pump	High speed reciprocating action	Extended wear life by 3 times. Eliminated need to heat treat components
Main bearings cam & crank shaft, rod bearings, wrist pins, pistons	Automotive engines	NASCAR racing, 24 hour endurance racing	Operating temp reduced 10%. Engine components showed no wear
Roller index shaft 440 stainless	Blood analyzer	Constant rotation at high speed, abrupt stop and start	Eliminated conventional lubricant. Increased wear 4 times. Stopped galling
Curing rolls & feed rolls	Paper mill	High speed, 290°F continuous use	Eliminated drag & buildup on rolls. Reduced maintenance by 50%
Medical instruments, ratchet gears	Orthopedic ratchet	Operating room	Eliminated galling and extended wear life 300%
Cutting tool, drills, end mills, jig burs, reamers	Cutting die steel, 440 stainless	High speed cutting, high feed rate	Tools lasted 5 times longer on average

APPLICATIONS

Assembly of metal components on machinery, weapons, transmissions and engines.

PACKAGING

125ml

250ml

500ml

1 Litre

5 Litre container

20 Litre container

208 Litre drum