Morgan
Advanced Ceramics
Everlube® Products Division

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TECHNICAL DATA

PLL7001

LUBE-LOK® 7001
CERAMIC SOLID FILM LUBRICANT

PRODUCT DESCRIPTION

Ceramic based dry film lubricant
Provides high temperature chemical resistance, lubrication and thermal stability
Has exceptional good flexibility and chip resistance

SUGGESTED USES

For sliding and rolling wear applications
In high temperature air and inert environments, including vacuum

TYPICAL PHYSICAL PROPERTIES

Color/Appearance	Matte gray
Hardness: Vickers (ASTM E-384)	200
Hardness: Pencil (ASTM D-3363)	>8H
Flexibility: 2" Mandrel	Pass
Service Temperature Range	To 1200°F in air To 1200oF in inert environment

TYPICAL FUNCTIONAL PROPERTIES

Film Adhesion (ASTM D-2510, Method A)	Pass
Wear Life (ASTM D-2714, 630 lb. Load, Grit Blast)	>3000 cycles*
Coefficient of Friction (ASTM D-2714 at Steady State)	.03 to .06*
G.E. Sliding Wear Test (E50TF76 S-1)	Coefficient of Friction
Temperature: 1200°F	Initial: .09 Final: .49
Test Materials Block: Inconel 718 Shoe: Inconel 718	

(Continued)

TYPICAL FUNCTIONAL PROPERTIES (continued)

Contact Stress:	25 KSI
Frequency:	60 cpm
Stroke:	9 mils
Cycles:	10,000
Abrasion Resistance:Taber (ASTM D-4060)	70 mg/1000 cycles average*
Gravelometer (70 psi, 25°C) Topcoat/Substrate Failure	7A to 8A
Outgassing (ASTM E-595)	
Vacuum: 6.0×10^{-6} Torr	
Total Mass Loss (TML)	0.01%
Collected Volatile Condensible Material (CVCM)	0.01%
Fluid Resistance (ASTM D-2510, Method C)	
Std.Test Fluid,TT-S-735, Type III	Pass
HD Lubricating Oil, MIL-L-2014, Gd. 10	Pass
Aircraft Turbine Oil, MIL-L-23699	Pass
JP-4 Jet Fuel, MIL-T-5624A	Pass
Hydraulic Fluid, MIL-H-5606	Pass
Non-Petroleum Hydraulic Fluid, MIL-H-8446	Pass
Aircraft Lube Oil, MIL-L-6082	Pass
Aircraft Turbine Oil, MIL-L-7808	Pass
Trichloroethylene, O-T-634	Pass
1,1,1 Trichloroethane	Pass
Methyl Ethyl Ketone	Pass
Toluene	Pass
VM&P Mineral Spirits	Pass
Ethanol	Pass

*Average of more than one determination

/kr: 10/19/98