



MACHINABLE, SELF-LUBRICATING LINER TECHNOLOGY

TECHNICAL DATASHEET

oscimax.com

Oscimax® XT

The original formulation designed principally to overcome life limiting factors.

When it comes to wear-resistance and operating life, Oscimax XT outperforms fabric-based PTFE liners and performs exceptionally well compared to other machinable, self-lubricating liner solutions. Independent lab tests have verified that XT exceeds all performance requirements of AS81934 beyond 100,000 cycles. At room temperature and a load of 37.5 ksi, XT exhibits 0.0005 in. of wear at 100,000 cycles, and its coefficient of friction is between 0.03 and 0.10. Even more impressive are the results of tests conducted at room temperature with no contaminants—Oscimax XT exhibited liner wear rates less than 0.004 in. at one million cycles.

Basic Description

Oscimax XT is a non-fabric based machinable liner that is unpeelable. Composed of a homogeneous mixture of PTFE & structural fibers in a resin system that enables very low friction levels.

Characteristics

- Nominal Liner Thickness:0.010 – 0.015 in.
Maximum Liner Thickness1:0.030 in.
Operating Temperature Range:-65 – +325 °F
Surface Speed:1.5 ft./min.
Coefficient of Friction Range2:0.03 – 0.10
Color:.....Dark gray to black mixture
Machining Capabilities:Fully machinable from surface to substrate using conventional drilling, honing, milling, reaming and turning techniques.

1Design dependent
2Load and temperature dependent

Typical Uses

- High load applications requiring low wear rates and long life:
• engine control systems
• flight control systems
• landing gear
• aircraft access doors and emergency exits

Contact

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Physical Properties

- Specific Gravity: 1.51
Density:..... 1.51 g/cc
Hardness1: 112

1Rockwell M scale

Mechanical Properties

- Static Load Carrying Capability1:
Static Limit:..... 75,000 psi
Static Ultimate: 112,500 psi
Dynamic Load Capability (continuous)2:..... 50,000 psi
Fluid Compatibility:
Skydrol 500B hydraulic fluid
MIL-PRF-7808 lubricating oil
Jet A fuel
MIL-PRF-5606 hydraulic oil
AS8243 anti-icing fluid
MIL-PRF-83282 hydraulic fluid

1Compressive Static Testing: Radial static testing of 75 ksi yields permanent set of 0.0004 to 0.0005 in. using the test procedures of AS81934. Radial ultimate load testing of 112.5 ksi does not reveal any notable liner extrusion.

2Dynamic Wear Testing: Dynamic wear testing was conducted at 37.5 ksi liner stress, ± 25° oscillation at 20 cpm. The bushing samples were of the steel bushing M81934/1-08C012.



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