



MACHINABLE, SELF-LUBRICATING LINER TECHNOLOGY

TECHNICAL DATASHEET

oscimax.com

Oscimax® XB

A modified formulation engineered for increased liner thickness and slightly higher static loads.

When it comes to wear-resistance and operating life, Oscimax XB outperforms fabric-based PTFE liners and performs exceptionally well compared to other machinable, self-lubricating liner solutions. Lab tests have verified that XB exceeds all performance requirements of AS81934 beyond 100,000 cycles. At room temperature and a load of 50 ksi, XB exhibits 0.0003 in. of wear at 100,000 cycles, and its coefficient of friction is between 0.03 and 0.10.

Basic Description

Oscimax XB 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: .....0.040 in.
Operating Temperature Range: .....-65 – +325 °F
Surface Speed: .....1.5 ft./min.
Coefficient of Friction Range2: .....0.03 – 0.10
Color:.....Light to dark gray 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: ..... 1.505
Density:..... 1.505 g/cc
Hardness1: ..... 115

1Rockwell M scale

Mechanical Properties

- Static Load Carrying Capability1:
Static Limit:..... 80,000 psi
Static Ultimate: ..... 120,000 psi
Dynamic Load Capability (continuous)2:..... 50,000 psi
Fluid Compatibility:
Hydraulic test fluid TT-S-735
MIL-PRF-7808 lubricating oil
Jet A fuel
MIL-PRF-5606 hydraulic oil
AS8243 anti-icing fluid
BMS3-11 hydraulic fluid

1Compressive Static Testing: Radial static testing of 80 ksi yields permanent set of 0.0005 in. using the test procedures of AS81934. Radial ultimate load testing of 120 ksi does not reveal any notable liner extrusion.
2Dynamic Wear Testing: Dynamic wear testing was conducted at 50 ksi liner stress, ± 25° oscillation at 20 cpm.



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