



MACHINABLE, SELF-LUBRICATING LINER TECHNOLOGY

TECHNICAL DATASHEET

oscimax.com

Oscimax® XZ

Designed with extremely low friction properties, Oscimax XZ is ideal for lightly loaded applications.

The coefficient of friction for Oscimax XZ is equivalent to competing solutions but it has a slight to significant advantage in wear and life, depending on the operating conditions. At room temperature with a load of 16 ksi, the XZ liner exhibits 0.0020 in. of wear at 100,000 cycles and its coefficient of friction is between 0.03 and 0.07.

Basic Description

Oscimax XZ 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 – +300 °F
Surface Speed:8 ft./min.
Coefficient of Friction Range2:0.03 – 0.07
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

- Lightly loaded applications that require low friction:
• engine control systems
• flight control systems
• landing gear
• aircraft access doors and emergency exits

Contact

Product Engineering Department
Astro Division
New Hampshire Ball Bearings, Inc.
155 Lexington Drive, Laconia, NH 03246
(603) 524-0004
nhbb.com

Physical Properties

- Specific Gravity: 1.48
Density:..... 1.48 g/cc
Hardness1: 86

1Rockwell M scale

Mechanical Properties

- Static Load Carrying Capability1:
Static Limit: 56,000 psi
Static Ultimate: 84,000 psi
Dynamic Load Capability (continuous)2: 16,000 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 56 ksi yields permanent set of 0.0001 to 0.0002 in. using the test procedures of AS81934. Radial ultimate load testing of 84 ksi does not reveal any notable liner extrusion.

2Dynamic Wear Testing: Dynamic wear testing was conducted at 16 ksi liner stress, ± 25° oscillation at 20 cpm. The bushing samples were of the steel bushing M81934/1-08C012.



New Hampshire Ball Bearings, Inc.
MinebeaMitsumi Group