oscimax®

MACHINABLE, SELF-LUBRICATING LINER TECHNOLOGY

TECHNICAL DATASHEET

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# Oscimax® XY

*One of two reduced-friction options, XY achieves superior life compared to competing solutions.*

Oscimax XY has a lower coefficient of friction than XT but superior wear resistance and life than equivalent reduced-friction liners on the market today. At room temperature with a load of 37.5 ksi, the XY liner exhibits approximately 0.0027 in. of wear at 100,000 cycles, and its coefficient of friction is between 0.04 and 0.09. Oscimax XY meets the performance requirements of AS81934.

## Basic Description

Oscimax XY 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 Thickness[1]: | 0.040 in. |
| Operating Temperature Range: | -65 – +325 °F |
| Surface Speed: | 1.5 ft./min. |
| Coefficient of Friction Range[2]: | 0.04 – 0.09 |
| Color: | Dark gray to black mixture |
| Machining Capabililties: | Fully machinable from surface to substrate using conventional drilling, honing, milling, reaming and turning techniques. |

[1]Design dependent

[2]Load 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

## Physical Properties

| | |
|---|---|
| Specific Gravity: | 1.35 |
| Density: | 1.35 g/cc |
| Hardness[1]: | 121 |

[1]Rockwell M scale

## Mechanical Properties

Static Load Carrying Capability[1]:

| | |
|---|---|
| Static Limit: | 67,000 psi |
| Static Ultimate: | 100,000 psi |
| Dynamic Load Capability (continuous)[2]: | 37,500 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

[1]Compressive Static Testing: Radial static testing of 67 ksi yields permanent set of 0.0001 to 0.0004 in. using the test procedures of AS81934. Radial ultimate load testing of 100 ksi does not reveal any notable liner extrusion.

[2]Dynamic 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.

## Contact

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