KAMATICSRWG
Engineered Performance

Engineering Data Sheet 199
June 23, 2011

KAron BX
Self-Lubricating Liner Material

1. Characteristics:

1.1. Description: A non-peelable, non-fabric, machineable homogenous mixture of PTFE fibers and a polyester resin system that enables very low friction levels.
1.2. Operating temperature range: -100° F to +325°F (-73 to +162°C)
1.3. Coefficient of friction range: .02 - .12, depending upon pressure, area, temperature, and velocity.
1.4. Compatible backing substrate materials: stainless steel, carbon steel, titanium, aluminum, nickel alloys, composites.
1.5. Surface speeds to 10 fpm (3.0 m/min)

2. Physical Properties:

2.1.	Density	1.505 gm/cc
2.2.	Hardness	Rockwell M 90/100
2.3.	Compression Modulus	7×10^5 psi (4,828 MPa)

3. Typical Load Carrying Capabilities:

3.1.	Static Ultimate *	120,000 psi (827 MPa)
3.2.	Static Limit **	80,000 psi (551 MPa)
3.3.	Dynamic (continuous) ***	33,000 psi (227 MPa)

Notes:
* Equivalent to 1.5 times the static limit load, local liner distress may occur. Typical liner thickness 0.012 in. (0.3 mm).
** Maximum load which will result in a permanent set in the liner no greater than .003 inches (0.075 mm) after the load is applied for 3 minutes. Typical liner thickness 0.012 in. (0.3 mm).
*** .0045 inches (0.114 mm) maximum permitted wear after 100,000 cycles of oscillation at ± 25° at 10 cpm (SAE AS81820A requirement). Typical liner thickness 0.012 in. (0.3 mm).

4. Applicable Specifications:

4.1. Qualified to SAE AS81820 Type A

5. Typical Applications:

5.1. For spherical bearing applications requiring extended life, such as flight controls, landing gear joints and shock strut bearings, fuel control/pumps, and mechanisms.
5.2. The above information is to be considered as a guide only. Kamatics Engineering should be consulted for specific applications.

6. Fluid Compatibility:

6.1. Compatible with aircraft hydraulic fluids, lubricating oils, jet fuels, de-icing fluids, cleaning fluids, and water.