DRAKE® 4435 PAI

Bearing Grade for High PV Applications

DESCRIPTION

DRAKE 4435 PAI is a wear grade containing graphite, PTFE, and other additives, making it well-suited for high pressure and velocity bearings and wear parts. It offers the lowest wear rate under most non-lubricated conditions.

TYPICAL APPLICATIONS:

- Sliding vanes
- Bobbins
- Thrust washers
- Seal and piston rings

Material Notes: *The wear rate and limiting PV for machined parts can be improved by post curing parts after machining to achieve optimum wear resistance on the part's outer surfaces.*

EXTRUDED SHAPES PROPERTIES

PHYSICAL PROPERTIES	METRIC	IMPERIAL	METHODS
Specific Gravity	1.59 g/cc	0.054 lb/in^3	ASTM D792
Water Absorption	0.12%	0.12%	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	1.5%	1.5%	Immersion; ASTM D570(2)
MECHANICAL PROPERTIES*			
Hardness, Rockwell M		M106	ASTM D785
Hardness, Rockwell		E62	ASTM D785
Hardness, Shore D		84	ASTM D2240
Tensile Strength, Ultimate	90 MPa	13,000 PSI	ASTM D638
Elongation at Break	2%	2%	ASTM D638
Tensile Modulus	6900 MPa	1,000,000 PSI	ASTM D638
Flexural Modulus	7586 MPa	1,100,00 PSI	ASTM D790
Flexural Yield Strength	159 MPa	16,000 PSI	ASTM D790
Compressive Strength	152 MPa	20,000 PSI	10% Def.; ASTM D695
Compressive Modulus	6552 MPa	990,000 PSI	ASTM D695
Izod Impact (notched)	32 J/m	0.6 ft-lbs/in	ASTM D256 Type A
THERMAL PROPERTIES			
Glass Transition Temp./T_g	275° C	527° F	ASTM D3418
Heat Deflection Temperature (264 PSI)	281° C	538° F	ASTM TMA
Coefficient of Linear Thermal Expansion	1.5 x 10^{-5} C^{-1}	0.8 x 10^{-5} F^{-1}	E831 TMA

*The mechanical properties of extruded shapes may differ from the values published by resin producers. Published resin data is always generated from test specimens injection molded under optimum conditions. Drake's extruded shape values are generated using specimens machined from actual shapes and may reflect surface imperfections from machining, enhanced crystallinity as a result of processing, and fiber alignment inherent in all reinforced plastic shapes, regardless of process. For additional information on the effects of fiber alignment, see Drake Fiber Orientation Diagram, available on the Resource page of our website.