

VTEC™ BG21

Thermoset Polyimide

RBI, Inc.

Message:

- High temperature resistance
- Strength at elevated temperature
- Superior mechanical properties
- High compressive strength and creep resistance
- Excellent chemical resistance
- Superior resistance to plasma etching
- Outstanding electrical properties
- Wear resistance, low friction, self-lubricating
- Non-abrasive to mating parts
- Extremely low moisture absorption
- Radiation resistant
- Compliant without deforming under load and temperature
- Very low outgassing
- Zero metal and mineral extractables
- Extremely dimensionally stable
- Equal CTE in X, Y and Z directions

General Information			
Features	Good Chemical Resistance		
	Good Compressive Strength		
	Good Creep Resistance		
	Good Dimensional Stability		
	Good Electrical Properties		
	Good Wear Resistance		
	High Heat Resistance		
	High Temperature Strength		
	Low Extractables		
	Low Friction		
	Low Moisture Absorption		
	Low to No Outgassing		
	Machinable		
	Radiation (Gamma) Resistant		
	Self Lubricating		
Forms	Customizable Forms		
	Rod		
	Sheet		
	Tubing		
Physical	Nominal Value	Unit	Test Method

Specific Gravity	1.47	g/cm ³	ASTM D792
Water Absorption (Saturation)	< 0.10	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (E-Scale)	86		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
--	70.9	MPa	
260°C ¹	58.5	MPa	
Tensile Elongation			ASTM D638
Break	5.5	%	
Break, 260°C ²	3.7	%	
Flexural Modulus	3150	MPa	ASTM D790
Flexural Strength			ASTM D790
100% Strain ³	58.6	MPa	
--	96.5	MPa	
Compressive Modulus	2810	MPa	ASTM D695
Compressive Strength			ASTM D695
260°C ⁴	142	MPa	
100% Strain	203	MPa	
Wear Rate - Jet Engine Simulation Testing, Bearing			
260°C	254.0	μm	
345°C	457.2	μm	
400°C	609.6	μm	
Dimensional Stability, Shrinkage - 24 hrs (260°C)	0.0	%	
Thermal	Nominal Value	Unit	Test Method
CLTE - Flow	4.0E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+10 to 1.0E+11	ohms	ASTM D257
Volume Resistivity	1.0E+12 to 1.0E+13	ohms · cm	ASTM D257
NOTE			
1.	15 min soak		
2.	15 min soak		
3.	15 min soak		
4.	15 min soak		

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