

Piezo Kinetics PKI 100 Lead Metaniobate Piezoelectric

Category : Ceramic , Oxide , Piezoelectric

Material Notes:

Lead Metaniobate exhibits properties not usually present in other types of piezoelectric ceramics. The noteworthy facts are its low mechanical QM, negligible aging, wide range of operating temperatures and small values for lateral and planar coupling compared to longitudinal coupling. The low QM enhances the use of PKI 100 material in the construction of wide bandwidth sensors for high frequency pulse echo measurements that require a short pulse and critical resolution. Its negligible aging helps simplify circuit design. Wide variations in temperature have limited effect on its dielectric and piezoelectric properties making it ideal for high temperature applications. Its high longitudinal coupling compared to lateral and planar coupling allows it to generate a better response under hydrostatic pressures and makes it useful for underwater sonar equipment. Property data at 25°C. Information supplied by Piezo Kinetics, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Piezo-Kinetics-PKI-100-Lead-Metaniobate-Piezoelectric.php

Physical Properties	Metric	English	Comments
Density	6.00 g/cc	0.217 lb/in ³	

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	350 °C	662 °F	Maximum Operating Temperature

Electrical Properties	Metric	English	Comments
Curie Temperature	450 °C	842 °F	
Dielectric Constant	300	300	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dissipation Factor	<= 0.015	<= 0.015	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Piezoelectric Longitudinal Coupling Factor, k33	0.35	0.35	
Piezoelectric Shear Charge Coefficient, d15, 10 ⁻¹² m/V	105	105	
Piezoelectric Longitudinal Voltage Coefficient, g33, 10 ⁻³ V-m/N	32	32	
Piezoelectric Planar Coupling Factor, kp	0.10	0.10	
Piezoelectric Mechanical Q	20	20	
Piezoelectric Shear Coupling Factor, k15	0.28	0.28	
Piezoelectric Longitudinal Charge			

Coefficient d33, 10⁻¹² m/V Electrical Properties	85 Metric	85 English	Comments
Piezoelectric Shear Voltage Coefficient, g15, 10 ⁻³ V-m/N	31	31	

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