

## Channel Industries 5800 Lead Zirconate Titanate Piezoelectric

Category : Ceramic , Oxide , Zirconium Oxide , Piezoelectric

### Material Notes:

Characterized by high coupling factors and high piezoelectric and dielectric constants over extended temperature ranges and stress amplitudes, lead zirconate titanates are the most extensively used material for electro-mechanical and electro-acoustic transducers. Data provided by Channel Industries, Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Channel-Industries-5800-Lead-Zirconate-Titanate-Piezoelectric.php](http://www.lookpolymers.com/polymer_Channel-Industries-5800-Lead-Zirconate-Titanate-Piezoelectric.php)

Physical Properties	Metric	English	Comments
Density	>= 7.55 g/cc	>= 0.273 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	48.0 MPa	6960 psi	Dynamic tensile strength
	83.0 MPa	12000 psi	Static

Electrical Properties	Metric	English	Comments
Curie Temperature	>= 300 °C	>= 572 °F	
Dielectric Constant	1100	1100	Free dielectric constant $K^{T/3}$
	1400	1400	$K^{T/1}$
Dissipation Factor	0.0040	0.0040	Low Field
Piezoelectric Longitudinal Coupling Factor, k <sub>33</sub>	0.67	0.67	
Piezoelectric Transverse Voltage Coefficient, d <sub>31</sub> , 10 <sup>-12</sup> m/V	-107	-107	
Piezoelectric Shear Charge Coefficient, d <sub>15</sub> , 10 <sup>-12</sup> m/V	390	390	
Piezoelectric Longitudinal Voltage Coefficient, g <sub>33</sub> , 10 <sup>-3</sup> V-m/N	25.2	25.2	
Piezoelectric Planar Coupling Factor, k <sub>p</sub>	-0.550	-0.550	
Piezoelectric Mechanical Q	1100	1100	
Piezoelectric Shear Coupling Factor, k <sub>15</sub>	0.60	0.60	
Piezoelectric Longitudinal Charge Coefficient, d <sub>33</sub> , 10 <sup>-12</sup> m/V	245	245	

Electrical Properties Piezoelectric Transverse Voltage Coefficient, $g_{15}$ , $10^{-3}$ V-m/N	Metric	English	Comments
Piezoelectric Shear Voltage Coefficient, $g_{15}$ , $10^{-3}$ V-m/N	31.5	31.5	
Piezoelectric Transverse Coupling Factor, $k_{31}$	-0.320	-0.320	

## Contact Songhan Plastic Technology Co.,Ltd.

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