

FAQ's TO FERROPERM PIEZOCERAMICS

QUESTION

How does the Ferroperm material programme match the industrial standards and other major materials classes?

ANSWER:

Ferroperm is one of the few suppliers in the industry to offer a complete range of piezoceramic materials.

The traditional standard materials can be summarised as follows:

Cross Reference Table for Ferroperm Piezoceramic Materials

	<i>Pz21</i>	<i>Pz24</i>	<i>Pz26</i>	<i>Pz27</i>	<i>Pz28</i>	<i>Pz29</i>	<i>Pz34</i>	<i>Pz35</i>	<i>Pz46</i>
<i>NAVY 1376A</i>			<i>I</i>	<i>II</i>	<i>III</i>				
<i>CENELEC EN 50324 -1</i>	<i>600</i>	<i>500</i>	<i>100</i>	<i>200</i>	<i>300</i>	<i>600</i>	<i>700</i>	<i>800</i>	
<i>INDUSTRIAL</i>	<i>3203HD</i>	<i>7A</i>	<i>4D</i>	<i>5A</i>	<i>8</i>	<i>5H</i>	<i>2</i>	<i>K81</i>	<i>K15</i>

In addition to these standard materials, Ferroperm also offer a range of other specially dedicated materials:

Pz23: Soft PZT based material close to Pz27, but with more stable temperature characteristic. Specially optimised for shear- and compression- type accelerometers.

Pz36: A new PZT-based material with engineered grain-structure. It has a unique low acoustic impedance and low losses, and can therefore be used for high-power transmission in applications where good acoustic matching is critical.

Pz37: A new PZT-based material with engineered grain-structure. It has a unique low acoustic impedance and medium permittivity. It is ideal for substitution for the very delicate lead-meta-niobate types in applications where broad bandwidth and good acoustic matching is critical.

Pz39: A new PZT-based material with engineered grain-structure. It has a unique low acoustic impedance and a permittivity comparable to normal Pz27 (PZT5A). It is ideal for substitution for the very delicate lead-meta-niobate types in applications where broad bandwidth and good acoustic matching is critical.

Pz52: A hard material with much higher permittivity than traditional hard PZT, high mechanical Qm, and low dielectric losses. The operation temperature is however not as high as for traditional hard PZT.

Pz54: A hard material with extremely high permittivity, high mechanical Qm, and low dielectric losses. The operation temperature is however not as high as for traditional hard PZT.

Pz52 and Pz54 are especially optimised for applications, where the highest power levels are required in combination with the smallest possible volume. The materials were developed to meet the challenges dictated by the rapid development in ultrasonic assisted surgery and therapeutics.