

# Piezoceramic Spheres Market Trends, Active Key Players, and Growth Projection Up to 2032

*Piezoceramic Spheres Market Expected to Reach \$412.9 Million by 2032 — Allied Market Research*

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EINPresswire.com/ -- According to Rohit Bhamburkar, Lead Analyst, Semiconductor and Electronics, at Allied Market Research, "The [piezoceramic spheres market](#) share is expected to witness considerable growth in coming years, owing to

growing adoption across industries to manufacture products, ease of fabricating piezoceramic spheres of various sizes, shapes, and requirement, and High piezoelectric activity and high permittivity. Allied Market Research, titled, "Piezoceramic Spheres Market by Material Type, Application, and Outer Diameter: Global Opportunity Analysis and Industry Forecast, 2023-2032", the piezoceramic spheres market was valued at \$208.13 million in 2022, and is estimated to reach \$412.9 million by 2032, growing at a CAGR of 7.1% from 2023 to 2032.

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Underwater devices were estimated as the leading application segment of the piezoceramic spheres market in 2022.”

*Allied Market Research*



Piezoceramic Spheres Market Size

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<https://www.alliedmarketresearch.com/request-sample/A107675>

A piezoceramic sphere is a circular-shaped ceramic that exhibits the piezoelectricity effect. The piezoelectricity effect is utilized in various equipment, including transducers, hydrophones, sonars, acoustic sensors, ultrasound probes, medical imaging devices, medical ultrasounds, and medical HIFU (high-intensity focused ultrasound). Piezoceramic spheres can be ordered in multiple sizes and customized to meet specific requirements. Additionally, the piezoelectric activity levels of the spheres can be manipulated by altering the composition of materials used during their manufacturing process.

The growing market for piezoelectric materials is attributed to the remarkable levels of piezoelectric activity and permittivity evinced by piezoceramic spheres. These spheres are distinguished by their enhanced capability to generate electricity when subjected to pressure, a quality that surpasses that of other piezoelectric materials, such as quartz. Furthermore, the simplistic process of fabricating piezoceramic spheres in various sizes and specifications is a salient feature of this product. It is noteworthy that the spheres are available in a diverse array of sizes, ranging from outer diameters of 2 mm and 5 mm to those of 100 mm and 300 mm. However, a major challenge of piezoceramic spheres is their low Curie temperature.

The limitations of the piezoceramic spheres market due to their low Curie temperatures present a challenge for their widespread application. Nevertheless, the field of industrial automation is poised to significantly benefit from the utilization of piezoceramic spheres. An abundance of opportunities is expected to arise during the forecast period as piezoceramic spheres are integrated into automation applications, including but not limited to transformers, sensors, ultrasonics, and micro-energy harvesting devices. The [piezoceramic spheres market demand](#) is segmented by material type, with PZT (Lead-Zirconate-Titanate) dominating the market in 2022 and holding the largest share. However, the other segment is projected to experience a more rapid expansion during the forecast period, primarily due to the diverse range of PZT materials available, which is a key driving factor for this segment.

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In terms of market segmentation by application, the piezoceramic spheres industry was dominated by the underwater devices segment in 2022, and the ultrasound technology segment is expected to expand at the fastest rate. Additionally, piezoceramic spheres have numerous underwater applications, such as hydrophones, underwater acoustic pickups, sonar uses, communication and control of marine systems, and scanning & imaging of the bottom of the sea. The 35mm – 70mm segment was dominant in the market in terms of outer diameter in 2022, and it is predicted that the 70mm – 100mm segment will have a higher growth rate during the forecast period. Piezoceramic spheres with such small diameters have specific applications in transducers, low-power generators, and receivers. They are frequently required in the data communication field and ultrasound field, whether underwater or in the air.

In terms of region, the piezoceramic spheres market size was dominated by Asia-Pacific in 2022, while North America is likely to grow at a faster rate during the forecast period. A major advantage that be attributed to the Asia-Pacific region is that there are many developing countries in the region, and hence, many fast-growing companies have picked up advanced technology.

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- By material type, the PZT (Lead-Zirconate-Titanate) segment accounted for a major share of the



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