

Global Lead-free piezoelectric ceramics Market Size study & Forecast, by Product (Barium Titanate Base, Bismuth Titanate Sodium Group, Niobium Acid-Base, Others) by Application (Industry & Manufacturing, Automotive Industry, Consumer Electronics, Medical and Others), and Regional Analysis, 2022-2029

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# **Abstracts**

Global Lead-free piezoelectric ceramics Market is valued approximately USD 212.14 million in 2021 and is anticipated to grow with a healthy growth rate of more than 16.3% over the forecast period 2022-2029. Lead-free piezoelectric ceramic can convert mechanical effects into electrical impulses and the other way around by applying pressure, movement, or vibration to generate mechanical effects like movement or vibration. Lead-free piezoelectric ceramics are used in many different applications because of its electromechanical effect. Some examples include actuators for atomic force microscopes, high-frequency loudspeakers, lithotripters, ultrasonic cleaning, clocks, and active vibration dampeners. Lead-free piezoelectric ceramic material must possess the following characteristics in order to be employed in a motor's transducer: a high mechanical quality factor, a high piezoelectric coupling constant, and a low loss factor. The Lead-free piezoelectric ceramics market is expanding because of factors such as increase in demand for lead-free piezoelectric ceramic material in various applications and rise in demand for biocompatible and environmentally friendly materials.

Rising manufacturing of electronic devices and rising demand from various end user industries is catering the market growth. According to Statista, in year 2020 the revenue from consumer electronics stood at USD 959.67 billion which increased to USD 987.16 billion in year 2022 and it is projected to reach at USD 1152.88 billion by year 2028.



This rising revenue indicates the rising demand for consumer electronics is catering the market growth. In addition, rising demand for various electronic devices and rising industrial and manufacturing sector is catering the market growth. However, high Cost of Lead-free piezoelectric ceramics may halt market growth.

The key regions considered for the Global Lead-free piezoelectric ceramics Market study includes Asia Pacific, North America, Europe, Latin America, and Rest of the World. North America dominated the market in terms of revenue, owing to the dominance of key market players, rising technological advancement and rising automotive manufacturing units in the region. Whereas Europe is expected to grow with a highest CAGR during the forecast period, owing to factors such as rising manufacturing and industrial development and , geographic expansion of key players, and active participation of government and nonprofit organizations in the market space.

Major market player included in this report are:

**KYOCERA** Corporation

Sumitomo Chemical Co., Ltd.

PI Ceramic GmbH

Zibo Yuhai Electronic Ceramic Co. Ltd.

Fuji Ceramics Corporation

NGK Spark Plug Co., Ltd.

Noritake Co. Limited

**KEMET Corporation** 

Seiko Epson Corporation

Canon Inc.

## Recent Developments in the Market:

In February 2021, CTS Corporation received financing from Eurostars to develop 'Environmentally Friendly Lead-Free Piezoelectric Ceramic Material' with a strategic partner Entekno Materials, Turkey. CTS co-developed a class of lead-free piezoelectric ceramics that may one day be used as a drop-in replacement for present lead-based systems with the help of early funding from its innovation platform and continuous support from the Eurostars programme.

In May 2021, The Swiss-based Kistler Group has expanded its line of intelligent auxiliary equipment to ensure that piezoelectric sensors may be placed precisely and securely in any measurement system. Connector extenders, adapters, and specific reamers enable sensor positioning and signal transmission.

Global Lead-free piezoelectric ceramics Market Report Scope:



Historical Data 2019-2020-2021

Base Year for Estimation 2021

Forecast period 2022-2029

Report Coverage Revenue forecast, Company Ranking, Competitive Landscape,

Growth factors, and Trends

Segments Covered Product, Application, Region

Regional Scope North America; Europe; Asia Pacific; Latin America; Rest of the World Customization Scope Free report customization (equivalent up to 8 analyst's working hours) with purchase. Addition or alteration to country, regional & segment scope\*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values to the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within countries involved in the study.

The report also caters detailed information about the crucial aspects such as driving factors & challenges which will define the future growth of the market. Additionally, it also incorporates potential opportunities in micro markets for stakeholders to invest along with the detailed analysis of competitive landscape and product offerings of key players. The detailed segments and sub-segment of the market are explained below:

By Product:

Barium Titanate Base
Bismuth Titanate Sodium Group
Niobium Acid-Base
Others

By Application:

Industry & Manufacturing
Automotive Industry
Consumer Electronics
Medical
Others

By Region:

North America

U.S.

Canada

Europe



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Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

Japan

Australia

South Korea

**RoAPAC** 

Latin America

Brazil

Mexico

RoLA

Rest of the World



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