

# Piezoelectric Materials – A Global Market Overview

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## Abstracts

### DESCRIPTION:

#### Report Synopsis

Piezoelectric materials constitute various types of ceramics, polymers, crystals and composites that can generate a voltage when being subjected to an external pressure or, conversely, expand upon the application of a voltage. A piezoelectric material's response to mechanical forces/pressures resulting in the generation of electric charges/voltages is referred to as the direct piezoelectric effect. In contrast, the application of electric charges/fields causing the induction of mechanical stresses or strains is termed as the converse piezoelectric effect.

Asia-Pacific leads the global market in terms of demand for piezoelectric materials, which is likely to be sustained by burgeoning auto and consumer electronics industries. The use of piezoelectric materials in the automotive sector has grown by leaps and bounds and they are finding application in fuel injectors, tire pressure sensors, engine knock sensors, backup sensors, dynamic pressure sensors and a number of other crucial safety features common in modern cars.

#### Research Findings & Coverage

Worldwide market for Piezoelectric Materials is explored in this report with respect to material type, applications and end-use industries

The study exclusively analyzes each reporting segment of piezoelectric material by geographic region and key country in each region

Organic Pigments for Automotive Finishes: Some Latest Developments

Organic Pigments Brightening the Plastics Industry

Recent Progress in Toner Technology with Organic Pigments

Key business trends focusing on product innovations/developments, M&As, JVs and other recent industry developments

Major companies profiled – 29

The industry guide includes the contact details for 84 companies

## Product Outline

The report analyzes the market for the key types of Piezoelectric Materials including:

Piezoceramics

Piezocomposites

Piezocrystals

Piezopolymers

Applications of Piezoelectric Materials, based on devices, analyzed in this study comprise the following:

Actuators

Generators

Motors

Sensors

Transducers

## Other Applications

The study examines the global markets for end-use industries of Piezoelectric Materials including the following:

Aerospace & Defense

Automotive

Consumer Goods

Healthcare

Information & Telecommunication

Other End-Use Industries

## Analysis Period, Units and Growth Rates

The report reviews, analyzes and projects the global Piezoelectric Materials market for the period 2014-2023 in terms of market value in US\$; and the compound annual growth rates (CAGRs) projected from 2017 through 2023

## Geographic Coverage

North America (The United States, Canada and Mexico)

Europe (France, Germany, Italy, Russia, Spain, The United Kingdom and Rest of Europe)

Asia-Pacific (China, India, Japan, South Korea and Rest of Asia-Pacific)

South America (Argentina, Brazil and Rest of South America)

Rest of World

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- Cedrat Technologies SA (France)
- Ceramtec GmbH (Germany)
- Channel Technologies Group, LLC (The United States)
- CTS Corporation (The United States)
- Noliac A/S (Denmark)
- Harris Corporation (The United States)
- Kureha Corporation (Japan)
- Kyocera Corporation (Japan)
- Morgan Advanced Materials Plc (The United Kingdom)
- Physik Instrumente (PI) GmbH & Co., KG. (Germany)
- PI Ceramic GmbH (Germany)
- Piezo Kinetics, Inc. (The United States)

Channel Technologies Group, Llc (The United States)  
Qortek, Inc. (The United States)  
SEPR - Saint-Gobain Zirpro (France)  
Smart Material Corporation (The United States)  
Solvay SA (Belgium)  
TDK Corporation (Japan)

#### **4. KEY BUSINESS TRENDS**

CTS Corporation Launches Piezoelectric Multilayer Plate Stacks at Actuator Conference 2018 in Bremen, Germany  
CTS Corporation Offers Piezoelectric Single Crystals  
TDK Corporation Launches PowerHap™ Piezo Actuators  
Piezoelectric Single Crystals from CTS Corporation are Ideal for Ultrasound Healthcare Applications  
Mide Technology Corporation Acquires Piezo Systems, Inc  
Noliac A/S Expands its Piezoelectric Business in Czech Republic  
PI Ceramic GmbH Manufactures Piezoelectric Tubes for Actuator Application  
Aerotech, Inc Unveils QFOCUS® QF-50 Piezo Nano-positioning Stage  
Aerotech, Inc Launches QNP3 series XYZ Piezo Positioning Stages  
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Aerotech, Inc. (United States)

APC International Ltd. (United States)

Channel Technologies Group, LLC (United States)

CTS Corporation (United States)

Harris Corporation (United States)

Mad City Labs, Inc. (United States)

Mide Technology Corporation (United States)

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