Technical Ceramic Market Report by Material Type (Oxide Ceramic, Non-Oxide Ceramic), Product (Monolithic Ceramics, Ceramic Coatings, Ceramic Matrix Composites (CMC)), End Use Industry (Electronics and Semiconductor, Automotive, Energy and Power, Medical, Military and Defense, and Others), and Region 2024-2032

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Report description:

The global technical ceramic market size reached US$ 84.1 Billion in 2023. Looking forward, IMARC Group expects the market to reach US$ 128.9 Billion by 2032, exhibiting a growth rate (CAGR) of 4.8% during 2024-2032.

A technical ceramic, also known as advanced or engineered ceramic, is an inorganic material manufactured using synthetic raw materials under a controlled process to achieve purity and improve its physical characteristics. It has high strength and electrical and corrosion resistance properties. As it is customizable and can maintain its precise, high-tolerance finish longer than any other material, technical ceramic is employed in the electronics and automotive industries across the globe.

Technical Ceramic Market Trends:
Technical ceramics are increasingly replacing metals, polymers, and refractory materials on account of their hardness, chemical stability, and high-temperature capability. This represents one of the key factors impelling the growth of the market. Moreover, they are utilized in the manufacturing of pump plungers, liners, shafts, mechanical seals, valve seats, spray nozzles, milling media, knives, lift pins, blades, bushings, and semiconductor rings. Besides this, advanced technical ceramics, such as zirconium dioxide (ZrO_2), aluminum oxide (Al_2O_3), silicon carbide (SiC), and silicon nitride (Si_3N_4), are used in industrial applications, including metal forming and machining of parts. This, coupled with the rising utilization of technical ceramics as construction

materials in mechanical components, is strengthening the growth of the market. Apart from this, these ceramics find extensive applications in the production of hip and knee implants as they offer chemical inertness and high wear resistance. Additionally, there is an increase in the use of technical ceramics in dentistry for fillings, implants, the replacement of crowns, and bonding materials in root canal procedures. This, along with the burgeoning healthcare industry, rising geriatric population and the increasing prevalence of chronic diseases, is anticipated to stimulate the growth of the market in the coming years.

Key Market Segmentation:
IMARC Group provides an analysis of the key trends in each sub-segment of the global technical ceramic market report, along with forecasts at the global, regional and country level from 2024-2032. Our report has categorized the market based on material type, product and end use industry.

Breakup by Material Type:

Oxide Ceramic
Non-Oxide Ceramic

Breakup by Product:

Monolithic Ceramics
Ceramic Coatings
Ceramic Matrix Composites (CMC)

Breakup by End Use Industry:

Electronics and Semiconductor
Automotive
Energy and Power
Medical
Military and Defense
Others

Breakup by Region:

North America
United States
Canada
Asia-Pacific
China
Japan
India
South Korea
Australia
Indonesia
Others
Europe
Germany
France

United Kingdom
Italy
Spain
Russia
Others
Latin America
Brazil
Mexico
Others
Middle East and Africa

Competitive Landscape:
The competitive landscape of the industry has also been examined along with the profiles of the key players being 3M Company, Bakony Technical Ceramics, CeramTec GmbH, Compagnie de Saint-Gobain S.A., CoorsTek Inc., Elan Technology, General Electric Company, KYOCERA Corporation, Mantec Technical Ceramics Ltd., Morgan Advanced Materials plc, NGK Spark Plug Co. Ltd. and Rauschert GmbH.

Key Questions Answered in This Report

1. What was the size of the global technical ceramic market in 2023?
2. What is the expected growth rate of the global technical ceramic market during 2024-2032?
3. What are the key factors driving the global technical ceramic market?
4. What has been the impact of COVID-19 on the global technical ceramic market?
5. What is the breakup of the global technical ceramic market based on the material type?
6. What is the breakup of the global technical ceramic market based on the product?
7. What is the breakup of the global technical ceramic market based on the end use industry?
8. What are the key regions in the global technical ceramic market?
9. Who are the key players/companies in the global technical ceramic market?

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