



Market Analysis

6th International Conference and Expo on Ceramics and Composite Materials

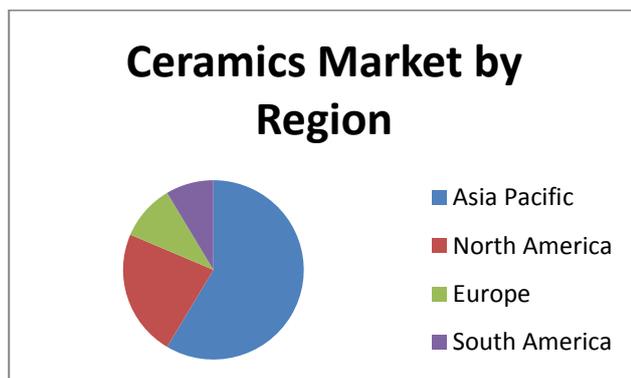
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According to a new report released by Transparency Market Research, the value of the global Ceramics market was valued at USD 229.13 billion in 2018 and is projected to grow at lucrative CAGR of 8.6% from 2019 to 2025. Rising demand from various industries such as heavy machinery, electronics, energy, automotive, cutting tools and defense is a key factor influencing market growth.

Industry growth is highly dependent on the dynamics of the electronic components and electrical equipment industries, which together accounted for over 70.0% of total demand in 2019. Products made from advanced ceramics, such as electrical conductive elastomers, find increasing applications in wire insulation, lamps, lighting, cell phones, inter-connectors, and power distribution on account of superior dielectric properties and good thermal stability. The market is increasingly driven by growing use of the product in healthcare applications, including biomedical plants as well as bone implants. In addition, they are used in dental applications where ceramic teeth can be matched to a patient's natural teeth. Numerous researchers have been striving to increase the application scope of the market in the healthcare industry, particularly in gene therapy and tissue engineering.

Ceramics Market Report covers the manufacturer's data, including shipment, price, gross profit, business distribution, industry overview in terms of historic and present situation key manufacturers, product/service application and types, key regions and marketplaces, forecast estimation for global market share, revenue, and CAGR. The Ceramics Market report 2019 deeply analyses significant features in major developing markets. The analysis includes market size, latest trends, drivers, threats, opportunities, as well as key market segments. The study reveals market dynamics in several geographic segments along with Ceramics market analysis for the current market environment and future scenario over the forecast period.



Importance & Scope

Ceramic engineering is the science and technology of creating objects from inorganic, non-metallic materials. This is done either by the action of heat, or at lower temperatures using precipitation reactions from high-purity chemical solutions. The term includes the purification of raw materials, the study and production of the chemical compounds concerned, their formation into components and the study of their structure, composition and properties. Ceramic materials may have a crystalline or partly crystalline structure, with long-range order on atomic scale. Glass ceramics may have an amorphous or glassy structure, with limited or short-range atomic order. They are either formed from a molten mass that solidifies on cooling, formed and matured by the action of heat, or chemically synthesized at low temperatures using, for example, hydrothermal or sol-gel synthesis. The special character of ceramic materials gives rise to many applications in materials engineering, electrical engineering, chemical engineering and mechanical engineering. As ceramics are heat resistant, they can be used for many tasks for which materials like metal and polymers are unsuitable. Ceramic materials are used in a wide range of industries, including mining, aerospace, medicine, refinery, food and chemical industries, packaging science, electronics, industrial and transmission electricity, and guided light wave transmission.

Ceramic materials are brittle, hard, and strong in compression, weak in shearing and tension. They withstand chemical erosion that occurs in an acidic or caustic environment. In many cases withstanding erosion from the acid and bases applied to it. Ceramics generally can withstand very high temperatures such as temperatures that range from 1,000 °C to 1,600 °C (1,800 °F to 3,000 °F). Exceptions include inorganic materials that do not have oxygen such as silicon carbide. Glass by definition is not a ceramic because it is an amorphous solid (non-crystalline). However, glass involves several steps of the ceramic process and its mechanical properties behave similarly to ceramic materials. Crystalline Ceramic materials are not amenable to a great range of processing. Methods for dealing with them tend to fall into one of two categories - either makes the ceramic in the desired shape, by reaction in situ, or by "forming" powders into the desired shape, and then sintering to form a solid body. Ceramic forming techniques include shaping by hand (sometimes including a rotation process called "throwing"), slip casting, tape casting (used for making very thin ceramic capacitors, etc.), injection moulding, dry pressing, and other variations. Non-crystalline ceramics, being glasses, tend to be formed from melts. The glass is shaped when either fully molten, by casting, or when in a state of toffee-like viscosity, by methods such as blowing to a mold. If later heat-treatments cause this glass to become partly crystalline, the resulting material is known as a glass-ceramic.

Ceramics are categorized as Industrial Ceramics, Fine Ceramics, Engineered Ceramics and enhanced/technical Ceramics that are categorized by excellent thermal, magnetic, optical and electrical properties. Due to these properties, they have emerged as effective alternatives to high-performance plastic and steel. They are highly resistant

to oxidation/corrosion and exhibit superior mechanical strengths. In addition to productivity and performance improvements, ceramics require low maintenance and results in lower overall costs. Titanates, modified silicates and borides generally comprise advanced ceramic compounds. Amongst all advanced ceramic materials, Zirconia compounds are witnessing robust growth with applications spanning diverse end uses.

US, Canada, Europe, Asia-Pacific, Middle East & Africa and Latin America are Geographic Markets Analyzed.

Target Audience

- Metallurgical and material science Engineers.
- Engineering professors and faculty.
- Members of different material science associations.
- Junior/Senior research fellows of Materials Science.
- Research Scholars and students.
- Directors/Co-Directors of Research-based companies across Europe and US who are Investing in ceramics.
- Scientists of Ceramics and Composite Materials and Materials Science and Engineering.
- Research Professors and research fellows of Ceramics and Composite Materials, Advanced Materials and Technologies.

Related Companies/Industries

- LSP Industrial Ceramics, Inc.
- C-Mac International, LLC
- Precision Ceramics
- Morgan Technical Ceramics
- McDanel Advanced Ceramic Technologies
- Morgan advanced materials
- Elan technology
- Saint Gobain
- APC International, Ltd

Related Associations and Societies

- Morbi Ceramics Associations
- Australian Ceramics Association
- Contemporary Ceramic Studios Association
- European Ceramic Industry Association
- British Ceramic Confederation
- Ceramics Southern Africa
- Midwest Ceramic Association
- Association of British Ceramic Distributors
- German Materials Society
- Federation of European Materials Societies (FEMS)
- German Engineering Materials Science Centre (GEMS)
- Centre for Materials Science and Nanotechnology (SMN) – UiO

- Germany Trade and Invest (GTAI)- Nanotechnology
- American Ceramic Society
- Australasian Ceramic Society
- Danish Ceramic Society
- Japan Ceramic Society