

## Titanium Dioxide (TiO<sub>2</sub>) – A Global Market Overview

*The report reviews, analyzes and projects the global market for Titanium Dioxide (TiO<sub>2</sub>) for the period 2012-2022*

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### SUMMARY

Stringent automobile emission control norms worldwide and concerns regarding fuel efficiency have compelled manufacturers to take measures for reducing vehicle weight considerably, thereby propelling demand for lightweight vehicles. One method of reducing vehicle weight is incorporating polycarbonates as replacement for part of the steel structures used in auto manufacturing. However, polycarbonates suffer from some drawbacks, such as low scratch resistance, which brings titanium dioxide into play. This material is used for coating polycarbonate structures that are further utilized in the auto manufacturing process. Using polycarbonates enables in reducing the weight of a vehicle and consequently enhancing fuel efficiency. Other applications of titanium dioxide in plastics include improving color, strength and opacity.

An expansion being witnessed in the construction industry constitutes a major factor that is bolstering demand for titanium dioxide. The use of this material in paints and coatings, its largest application area, is being supported by a simultaneous surge in construction activity, which has been more evident in the developing economies of Asia-Pacific and South America. China leads the global demand for titanium dioxide in the construction sector, with other regions, such as India, Southeast Asia, Brazil and Mexico not far behind.

On a negative note, strict environmental regulations constitute a detrimental factor that restrains demand for titanium dioxide. The process of producing this material causes a number of harmful solid and acid wastes to be produced and several regulations are now in place, more so in developed regions, for controlling the emission and disposal of these wastes. Among the two processes used for manufacturing titanium dioxide, the sulfate process, predominantly used in China, leads to large amounts of solid waste being produced. This has led Chinese manufacturers to change tack and implement a slew of alternatives aimed at lowering the pollution caused by production of titanium dioxide.

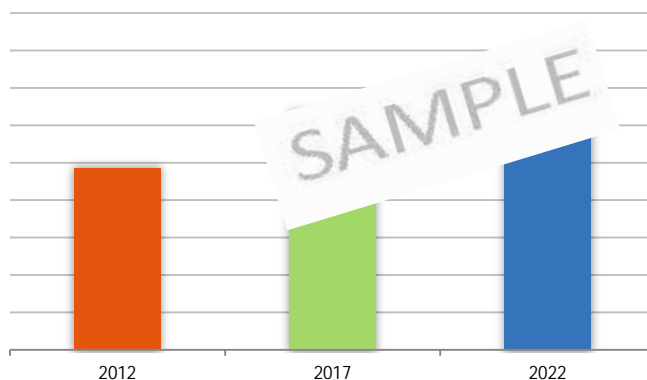
Worldwide market for Titanium Dioxide applications analyzed in this study include Architectural Paints & Coatings, Industrial Paints & Coatings, Paper, Plastics and Other Applications. The global markets for the above mentioned applications are analyzed in terms of both in

metric tons and USD. Global volume consumption of Titanium Dioxide is projected to reach 7.8 million metric tons by 2022 from a forecast 6.1 million metric tons in 2016 at a CAGR of 4.1% between 2016 and 2022.

This report reviews, analyses and projects the Titanium Dioxide market for the period 2012-2022 globally and the regional markets including North America, Europe, Asia-Pacific, South America and Rest of World. The regional markets further analyzed for 14 independent countries across North America – The United States, Canada and Mexico; Europe – France, Germany, Italy, Spain and the United Kingdom; Asia-Pacific – China, India, Japan and South Korea; South America – Argentina and Brazil.

This 322 page global market research report includes 242 charts (includes a data table and graphical representation for each chart), supported with meaningful and easy to understand graphical presentation, of market numbers. This report profiles 10 key global players and 30 major players across North America – 6; Europe – 3; Asia-Pacific – 20; and Rest of World – 1. The research also provides the listing of the companies engaged in manufacturing and supply of titanium dioxide. The global list of companies covers the address, contact numbers and the website addresses of 100 companies.

Global Titanium Dioxide Market Analysis (2012-2022) in Volume (000' Metric Tons)



## SAMPLE COMPANY PROFILE

### THE NATIONAL TITANIUM DIOXIDE COMPANY LIMITED (CRISTAL) (SAUDI ARABIA)

Malik Road, King's Road Tower, King Abdulaziz Road, 16th Floor P.O. Box 13586 Jeddah 21414  
 Kingdom of Saudi Arabia  
 Phone: 966.12.224.8000, Fax: 966.12.606.9087  
 Email: info@cristal.com  
 Website: www.cristal.com

#### Business Profile

The National Titanium Dioxide Company Limited (Cristal) based in Jeddah, Saudi Arabia ranks among the largest manufacturers of titanium dioxide in the world. The company is also a leading manufacturer of titanium chemicals, mineral sands, and titanium metal powder; and a global leading supplier of ultrafine titanium dioxide products and titanium chemicals. The company is engaged in the manufacture and supply of titanium dioxide (TiO<sub>2</sub>), titanium chemicals, mineral sands, and titanium metal powder to various industries including paint, paper, plastics, and ink. Besides headquarters, the company has manufacturing locations in Ashtabula, Ohio; Baltimore, Maryland; Salvador, Bahia; Stallingborough, UK; Thann, France; Yanbu, Saudi Arabia; and Bunbury, Australia; and a mine site in Paraiba, Brazil as well.

#### Product Portfolio

Cristal's titanium business offers pigments, comprising titanium dioxide (TiO<sub>2</sub>), performance chemicals, CristalACTIV™ specialty titanium dioxides (Ultrafine TiO<sub>2</sub>), titanium tetrachloride (TiCl<sub>4</sub>) and related products; mining, including leucosene, rutile, zircon, and ilmenite; metals, such as CP (Commercially Pure) titanium powder, and Ti 6-4 alloy (6% Aluminum/ 4% Vanadium); and chemicals, covering carbon dioxide, caustic flake, caustic soda, chlorine, copperas, gypsum, hydrochloric acid, hydrogen, hypochlorite, iron chlorosulfate, molten sulfur, sodium silicate, and sulfuric acid.

Product	Particulars
<b>TiO<sub>2</sub> for Paint &amp; Coatings</b>	
TiONA® 595	Is a high performance, multipurpose chloride-process rutile TiO <sub>2</sub> pigment with excellent dispersion, opacity, gloss and durability; used in various interior and exterior, water and solvent based coating applications
TiONA® 121	Is an alumina / silica modified chloride-process rutile TiO <sub>2</sub> pigment used as a multipurpose product in a variety of interior and exterior coatings applications

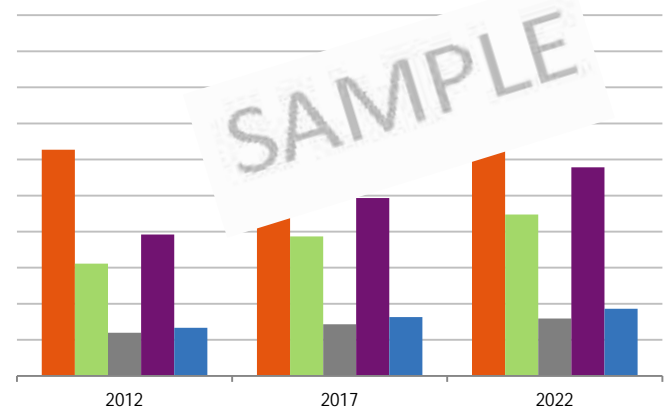
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Glance at 2017 Global Titanium Dioxide Volume Market Share (%) by Geographic Region – North America, Europe, Asia-Pacific, South America and Rest of World



North American Titanium Dioxide Market Analysis (2012-2022) by Application – Architectural Paints & Coatings, Industrial Paints & Coatings, Paper, Plastics and Other Applications in 000' Metric Tons



## KEY PLAYERS PROFILED

- CNNC Hua Yuan Titanium Dioxide Co., Ltd.
- Evonik Industries AG
- Guangdong Huiyun Titanium Industry Corporation Limited
- Henan Billions Chemicals Co., Ltd.
- Huntsman International LLC
- Jiangsu Taibai Group Co., Ltd.
- Kronos Worldwide, Inc.
- The Chemours Company
- The National Titanium Dioxide Company Limited (Cristal)
- Tronox Limited

## REGIONS COVERED

- **North America** (United States, Canada and Mexico)
- **Europe** (France, Germany, Italy, Spain, 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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