

# Titanium Dioxide Market by Grade (Rutile, Anatase), Process (Sulfate, Chloride), Application (Paints & Coating, Plastics, Paper, Inks), & Region(North America, Europe, Asia Pacific, MEA, South America) -Trends and Forecasts up to 2026

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## **Abstracts**

The global Titanium Dioxide market size is estimated to be USD 20.9 billion in 2021 and is projected to reach USD 27.9 billion by 2026, at a CAGR of 5.9% between 2021 and 2026. Titanium dioxide is an oxide of metal titanium that occurs naturally in several kinds of minerals sands. It is the most important white inorganic pigment that possesses good thermal stability. It also has excellent light-scattering properties and is used when white opacity and brightness is required. Titanium dioxide is available in two crystal structures, namely, anatase and rutile. Rutile pigments are preferred because they are more stable, durable, efficient, and have high absorbance property than anatase pigments. Titanium dioxide is used in a wide range of industries and applications, including paints & coatings, paper, plastics, inks, and others. Titanium dioxide pigments are most widely used for paints & coatings application as they efficiently scatter visible light, which imparts whiteness, brightness, and opacity to the coating. The steady growth in construction industry and increase in demand for lightweight vehicle in automotive industry expects to drive market for titanium dioxide in paints & coating applications. Increase in demand for ultrafine titanium dioxide and growth in photocatalytic application are opportunities in titanium dioxide market.

"Rutile is projected to be the largest segment by grade in Titanium Dioxide market"

Rutile is the largest grade segment for the Titanium Dioxide market. The structure of rutile is more compact and stable than anatase. The rutile grade titanium dioxide has excellent optical properties, including better dispersion, better coloring, opacity-optimal



weather resistance, anti-yellowing property, and a bluer undertone. Rutile titanium dioxide is preferred in paints and coatings because it can offer better color strength and opacity than anatase-grade titanium dioxide. It is more suitable for exterior applications and used in interface applications because of its high refractive index; therefore, these pigments have improved ability to scatter light in paint films.

"Sulfate is projected to be the largest segment by process in Titanium Dioxide market"

Sulfate is the largest process segment for the Titanium Dioxide market. The sulfate process is a batch process that utilizes sulfuric acid to extract titanium dioxide from Ilmenite or titanium slag. The sulfate process for the manufacturing of titanium dioxide is majorly utilized in the APAC region, particularly in China. The sulfate process is more economical as it uses low-grade and cheaper ores, and simpler technology to manufacture titanium dioxide. The production cost of sulfate is high, and a large amount of waste material is generated during the process technology, which further includes pollution control cost. The global manufacturers are focused on shifting toward the chloride process due to environmental considerations and end-use requirements for high-quality titanium dioxide.

"Paints & Coating is the largest segment by application in Titanium Dioxide market during forecast region."

Titanium dioxide is an essential white pigment used in the paints & coatings industries. When used in paint & coating system, it ensures the longevity of the paint and the continued protection of the substrate. Titanium dioxide is used in various paints & coatings applications to provide aesthetic appeal, opacity, and durability. It is used in various architectural and industrial coating applications. In architectural coatings, pigments are used in paints, stains, lacquers, primers, and clear coats applications. In industrial coatings, they are used in automotive, coil, powder, and other coating applications. The rapidly growing housing and construction sector, increasing gross domestic product (GDP), ongoing rapid urbanization, and increasing disposable income propel the paints and coatings market which further is fueling the demand for titanium dioxide.

"APAC accounts for the largest share in Titanium Dioxide market by region"

APAC was the largest Titanium Dioxide market in 2020. Increasing investments in infrastructure development projects, growing urbanization, improving standard of living, and thriving automotive sector, as well as high economic growth, are the key factors for



the region's overall growth. The strengthening economy of countries such as China and India attract new investments from global manufacturers. APAC is the largest market for the paints and coating industry, driven by the ever-increasing population and rapid urbanization in China and India. China is the world's largest producer and consumer of paints and coatings, with several leading players investing in the country to build new manufacturing facilities. Paints & coatings is the largest application segment for titanium dioxide which is projected to grow with growth in paint & coating application in APAC region. Apart from being a major consumer of titanium dioxide, China exports titanium dioxide to India, Vietnam, Brazil, Spain, South Korea, Japan, and others. Lomon Billions Group, the third-largest manufacturer of titanium dioxide globally, has its production plants in the China. Apart from Lomon Billions, TAYCA CORPORATION (Japan), ILUKA RESOURCES (Australia), ISHIHARA SANGYO KAISHA, LTD.(Japan) and many small and mid-size enterprises (SMEs) produce titanium dioxide in APAC region.

Extensive primary interviews were conducted to determine and verify the market size for several segments and sub segments and information gathered through secondary research.

The break-up of primary interviews is given below:

By Company Type - Tier 1 – 55%, Tier 2 – 30%, and Tier 3 – 15%

By Designation – C level – 21%, Director level – 23%, and Others\* – 56%

By Region – North America – 15%, Europe – 27%, APAC – 45%, South America – 7%, and Middle East & Africa - 6%

Notes: Others include sales, marketing, and product managers.

Tier 1: >USD 1 Billion; Tier 2: USD 500 million–1 Billion; and Tier 3:



## **Contents**

#### 1 INTRODUCTION

- 1.1 STUDY OBJECTIVES
- 1.2 MARKET DEFINITION

TABLE 1 MARKET SEGMENT DEFINITION, BY GRADE

TABLE 2 MARKET SEGMENT DEFINITION, BY PROCESS

TABLE 3 MARKET SEGMENT DEFINITION, BY APPLICATION

1.3 MARKET SCOPE

FIGURE 1 TITANIUM DIOXIDE MARKET SEGMENTATION

1.3.1 INCLUSIONS & EXCLUSIONS

TABLE 4 INCLUSIONS & EXCLUSIONS IN REPORT

- 1.4 YEARS CONSIDERED
- 1.5 CURRENCY
- 1.6 PACKAGE SIZE
- 1.7 LIMITATIONS
- 1.8 STAKEHOLDERS
- 1.9 SUMMARY OF CHANGES

## **2 RESEARCH METHODOLOGY**

## 2.1 RESEARCH DATA

FIGURE 2 TITANIUM DIOXIDE MARKET: RESEARCH DESIGN

- 2.1.1 SECONDARY DATA
  - 2.1.1.1 Key data from secondary sources
- 2.1.2 PRIMARY DATA
  - 2.1.2.1 Key data from primary sources
  - 2.1.2.2 Key industry insights
  - 2.1.2.3 Breakdown of primary interviews
- 2.2 MARKET SIZE ESTIMATION
- 2.2.1 SUPPLY-SIDE APPROACH: ASCERTAINING SHARE OF TOP PLAYERS IN GLOBAL MARKET, IN TERMS OF SUPPLY

FIGURE 3 APPROACH 1: BASED ON PRODUCTION CAPACITY & INDUSTRY UTILIZATION RATES. 2020

2.2.2 DEMAND-SIDE APPROACH: BASED ON ASSESSMENT OF REGIONAL DEMAND AND ITS SHARE IN GLOBAL MARKET

FIGURE 4 APPROACH 2: BASED ON 2020 TOTAL REGIONAL DEMAND ESTIMATE 2.3 DATA TRIANGULATION



FIGURE 5 TITANIUM DIOXIDE MARKET: DATA TRIANGULATION

2.4 RESEARCH ASSUMPTIONS AND LIMITATIONS

2.4.1 ASSUMPTIONS

2.4.2 LIMITATIONS

2.4.3 GROWTH RATE ASSUMPTIONS

2.5 FORECAST FACTOR IMPACTING GROWTH

FIGURE 6 FORECAST FACTOR IMPACTING GROWTH

#### **3 EXECUTIVE SUMMARY**

FIGURE 7 RUTILE-GRADE TITANIUM DIOXIDE HELD LARGEST MARKET SHARE IN 2020

FIGURE 8 SULFATE PROCESS CAPTURED LARGEST SHARE OF TITANIUM DIOXIDE MARKET IN 2020

FIGURE 9 PAINTS AND COATINGS ACCOUNTED FOR LARGEST MARKET SHARE IN 2020

FIGURE 10 APAC TO BE FASTEST-GROWING MARKET FOR TITANIUM DIOXIDE DURING FORECAST PERIOD

## **4 PREMIUM INSIGHTS**

4.1 SIGNIFICANT OPPORTUNITIES IN TITANIUM DIOXIDE MARKET FIGURE 11 PAINTS & COATINGS AND PLASTICS APPLICATIONS TO OFFER GROWTH OPPORTUNITIES TO MARKET PLAYERS

4.2 TITANIUM DIOXIDE MARKET IN APAC, BY APPLICATION, GRADE, AND COUNTRY, 2020

FIGURE 12 CHINA CAPTURED LARGEST MARKET SHARE IN APAC, IN TERMS OF VOLUME, IN 2020

4.3 TITANIUM DIOXIDE MARKET, BY GRADE

FIGURE 13 RUTILE-GRADE TITANIUM DIOXIDE TO DOMINATE OVERALL MARKET, IN TERMS OF VOLUME, DURING 2021–2026

4.4 TITANIUM DIOXIDE MARKET, BY PROCESS

FIGURE 14 SULFATE PROCESS TO LEAD OVERALL TITANIUM DIOXIDE MARKET, IN TERMS OF VOLUME, IN 2021

4.5 TITANIUM DIOXIDE MARKET, BY APPLICATION

FIGURE 15 PAINTS & COATINGS TO COMMAND OVERALL TITANIUM DIOXIDE MARKET, IN TERMS OF VOLUME, THROUGHOUT FORECAST PERIOD

4.6 TITANIUM DIOXIDE MARKET, BY COUNTRY

FIGURE 16 INDIA TO WITNESS HIGHEST CAGR IN GLOBAL TITANIUM DIOXIDE



## MARKET, IN TERMS OF VOLUME, FROM 2021 TO 2026

#### **5 MARKET OVERVIEW**

#### 5.1 INTRODUCTION

FIGURE 17 MARKET DYNAMICS: DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES

- 5.1.1 DRIVERS
  - 5.1.1.1 Thriving construction sector worldwide

FIGURE 18 NEW HOUSES SOLD IN US, 2016–2020 (THOUSAND UNITS)

TABLE 5 NET ANNUAL GROWTH RATE OF HOUSEHOLD DISPOSABLE INCOME, BY COUNTRY, 2017–2020

- 5.1.1.2 Growing demand for do-it-yourself paints and coating solutions amid COVID-19 pandemic
  - 5.1.1.3 Surging demand for lightweight vehicles
  - 5.1.1.4 Booming cosmetics and personal care industries

FIGURE 19 YEAR-OVER-YEAR GROWTH RATE OF GLOBAL COSMETICS INDUSTRY (%), 2011–2020

- 5.1.2 RESTRAINTS
- 5.1.2.1 Stringent environmental policies of governments regarding production of titanium dioxide
  - 5.1.3 OPPORTUNITY
- 5.1.3.1 High adoption of ultrafine particles of titanium dioxide in cosmetics and construction industries
  - 5.1.3.2 Increased use of titanium dioxide as photocatalyst
  - 5.1.4 CHALLENGES
    - 5.1.4.1 Uncertainty about safety of titanium dioxide
    - 5.1.4.2 Volatility in cost of titanium dioxide
- 5.2 PORTER'S FIVE FORCES ANALYSIS

FIGURE 20 TITANIUM DIOXIDE MARKET: PORTER'S FIVE FORCES ANALYSIS

- 5.2.1 BARGAINING POWER OF SUPPLIERS
- 5.2.2 BARGAINING POWER OF BUYERS
- 5.2.3 INTENSITY OF COMPETITIVE RIVALRY
- 5.2.4 THREAT OF NEW ENTRANTS
- 5.2.5 THREAT OF SUBSTITUTES

TABLE 6 TITANIUM DIOXIDE MARKET: PORTER'S FIVE FORCES ANALYSIS

5.3 TITANIUM DIOXIDE ECOSYSTEM

FIGURE 21 TITANIUM DIOXIDE ECOSYSTEM

5.4 VALUE CHAIN ANALYSIS



FIGURE 22 VALUE CHAIN ANALYSIS

5.5 AVERAGE PRICE ANALYSIS

FIGURE 23 WEIGHTED AVERAGE PRICING ANALYSIS (USD/TON) OF TITANIUM DIOXIDE, BY REGION, 2020

5.6 TRADE ANALYSIS

TABLE 7 TITANIUM DIOXIDE EXPORT, BY COUNTRY, 2019–2020 (TONS)

TABLE 8 TITANIUM DIOXIDE IMPORT, BY COUNTRY, 2019–2020 (TONS)

5.7 TECHNOLOGY ANALYSIS

5.7.1 PROCESS TO OBTAIN TITANIUM DIOXIDE

5.7.1.1 Method of manufacturing titanium dioxide using chloride process

FIGURE 24 MANUFACTURING TITANIUM DIOXIDE USING CHLORIDE PROCESS

5.7.1.2 Method of manufacturing titanium dioxide using sulfate process

FIGURE 25 MANUFACTURING TITANIUM DIOXIDE USING SULFATE PROCESS

5.7.2 SURFACE TREATMENT OF TITANIUM DIOXIDE

5.8 TRADE AND REGULATORY LANDSCAPE

5.8.1 REACH - ECHA REGULATION

5.8.2 CODE OF FEDERAL REGULATION (CFR)

5.8.3 REGULATION PERTAINING TO USE OF TITANIUM DIOXIDE IN

SUNSCREENS

5.9 PATENT ANALYSIS

5.9.1 INTRODUCTION

5.9.2 METHODOLOGY

5.9.3 DOCUMENT TYPE

FIGURE 26 NUMBER OF PATENTS FILED IN LAST 10 YEARS

5.9.4 PUBLICATION TRENDS

FIGURE 27 YEAR-WISE DATA FOR NUMBER OF PATENTS PUBLISHED, 2010–2020

**5.9.5 INSIGHT** 

5.9.6 JURISDICTION ANALYSIS (2010–2020)

FIGURE 28 PATENT ANALYSIS FOR TOP 10 JURISDICTIONS

5.9.7 TOP COMPANIES/APPLICANTS OF PATENTS

FIGURE 29 TOP 10 COMPANIES/APPLICANTS WITH HIGHEST NUMBER OF PATENTS, 2010–2020

TABLE 9 LIST OF PATENTS BY KRONOS INTERNATIONAL INC., 2017-2019

TABLE 10 LIST OF PATENTS BY TRONOX LLC., 2016-2020

TABLE 11 LIST OF PATENTS BY DUPONT, 2013-2016

TABLE 12 LIST OF PATENTS BY CRISTAL USA INC., 2017-2019

TABLE 13 TOP 10 PATENT OWNERS (US) IN LAST 10 YEARS, 2010-2020

5.10 CASE STUDY



5.10.1 UTILIZATION OF INNOVATIVE NANO TITANIUM PIGMENTS IN COSMETICS INDUSTRY

5.10.2 USE OF TITANIUM DIOXIDE AS PHOTOCATALYST TO PREVENT AIR POLLUTION

5.11 TRENDS/DISRUPTIONS IMPACTING CUSTOMERS' BUSINESSES FIGURE 30 ENERGY EFFICIENCY IN BUILDING & CONSTRUCTION TO ENHANCE FUTURE REVENUE MIX

TABLE 14 SHIFT IMPACTING YC AND YCC

5.12 SCENARIO ANALYSIS OF TITANIUM DIOXIDE MARKET

FIGURE 31 TITANIUM DIOXIDE MARKET, IN TERMS OF VOLUME, BY SCENARIO ANALYSIS, 2019–2026 (KILOTON)

5.13 MACROECONOMIC INDICATOR

TABLE 15 GDP GROWTH PROJECTION WORLDWIDE

TABLE 16 GLOBAL AUTOMOTIVE PRODUCTION, BY COUNTRY

5.14 COVID-19 IMPACT

FIGURE 32 PRE- AND POST-COVID ANALYSIS OF TITANIUM DIOXIDE DEMAND

5.15 ADJACENT AND RELATED MARKETS

5.15.1 INTRODUCTION

5.15.2 LIMITATIONS

5.15.3 PAINTS & COATINGS MARKET

5.15.3.1 Market definition

5.15.3.2 Paints & coatings market, by resin type

TABLE 17 ARCHITECTURAL PAINTS & COATINGS MARKET SIZE, BY RESIN TYPE, 2020–2025 (KILOTON)

TABLE 18 ARCHITECTURAL PAINTS & COATINGS MARKET SIZE, BY RESIN TYPE, 2020–2025 (USD MILLION)

TABLE 19 INDUSTRIAL PAINTS & COATINGS MARKET SIZE, BY RESIN TYPE, 2020–2025 (KILOTON)

TABLE 20 INDUSTRIAL PAINTS & COATINGS MARKET SIZE, BY RESIN TYPE, 2020–2025 (USD MILLION)

5.15.3.3 Paints & coatings market, by technology

TABLE 21 ARCHITECTURAL PAINTS & COATINGS MARKET SIZE, BY TECHNOLOGY, 2020–2025 (KILOTON)

TABLE 22 ARCHITECTURAL PAINTS & COATINGS MARKET SIZE, BY TECHNOLOGY, 2020–2025 (USD MILLION)

TABLE 23 INDUSTRIAL PAINTS & COATINGS MARKET SIZE, BY TECHNOLOGY, 2020–2025 (KILOTON)

TABLE 24 INDUSTRIAL PAINTS & COATINGS MARKET SIZE, BY TECHNOLOGY, 2020–2025 (USD MILLION)



5.15.3.4 Paints & coatings market, by end-use industry

TABLE 25 ARCHITECTURAL PAINTS & COATINGS MARKET SIZE, BY END-USE INDUSTRY, 2020–2025 (KILOTON)

TABLE 26 ARCHITECTURAL PAINTS & COATINGS MARKET SIZE, BY END-USE INDUSTRY, 2020–2025 (USD MILLION)

TABLE 27 INDUSTRIAL PAINTS & COATINGS MARKET SIZE, BY END-USE INDUSTRY, 2020–2025 (KILOTON)

TABLE 28 INDUSTRIAL PAINTS & COATINGS MARKET SIZE, BY END-USE INDUSTRY, 2020–2025 (USD MILLION)

5.15.3.5 Paints & coatings market, by region

TABLE 29 PAINTS & COATINGS MARKET SIZE, BY REGION, 2020–2025 (KILOTON) TABLE 30 PAINTS & COATINGS MARKET SIZE, BY REGION, 2020–2025 (USD MILLION)

5.15.4 ANTIMICROBIAL COATINGS MARKET

5.15.4.1 Market definition

MILLION)

5.15.4.2 Antimicrobial coatings market, by type

TABLE 31 ANTIMICROBIAL COATINGS MARKET SIZE, BY TYPE, 2018–2025 (TON) TABLE 32 ANTIMICROBIAL COATINGS MARKET SIZE, BY TYPE, 2018–2025 (USD

5.15.4.3 Antimicrobial coatings market, by application

TABLE 33 ANTIMICROBIAL COATINGS MARKET SIZE, BY APPLICATION, 2018–2025 (TON)

TABLE 34 ANTIMICROBIAL COATINGS MARKET SIZE, BY APPLICATION, 2018–2025 (USD MILLION)

5.15.4.4 Antimicrobial coatings market, by region

TABLE 35 ANTIMICROBIAL COATINGS MARKET SIZE, BY REGION, 2018–2025 (TON)

TABLE 36 ANTIMICROBIAL COATINGS MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

5.15.5 INORGANIC PIGMENTS MARKET

5.15.5.1 Market definition

5.15.5.2 Inorganic pigments market, by pigment type

TABLE 37 INORGANIC PIGMENTS MARKET SIZE, BY PIGMENT TYPE, 2017–2024 (KILOTON)

TABLE 38 INORGANIC PIGMENTS MARKET SIZE, BY PIGMENT TYPE, 2017–2024 (USD MILLION)

5.15.5.3 Inorganic pigments market, by application

TABLE 39 INORGANIC PIGMENTS MARKET SIZE, BY APPLICATION, 2017–2024 (KILOTON)



TABLE 40 INORGANIC PIGMENTS MARKET SIZE, BY APPLICATION, 2017–2024 (USD MILLION)

5.15.5.4 Inorganic pigments market, by end-use industry

TABLE 41 INORGANIC PIGMENTS MARKET SIZE, BY END-USE INDUSTRY, 2017–2024 (KILOTON)

TABLE 42 INORGANIC PIGMENTS MARKET SIZE, BY END-USE INDUSTRY, 2017–2024 (USD MILLION)

5.15.5.5 Inorganic pigments market, by region

TABLE 43 INORGANIC PIGMENTS MARKET SIZE, BY REGION, 2017–2024 (KILOTON)

TABLE 44 INORGANIC PIGMENTS MARKET SIZE, BY REGION, 2017–2024 (USD MILLION)

## **6 TITANIUM DIOXIDE MARKET, BY GRADE**

#### 6.1 INTRODUCTION

TABLE 45 DIFFERENCE BETWEEN RUTILE AND ANATASE

FIGURE 33 RUTILE SEGMENT ACCOUNTED FOR LARGEST SHARE OF OVERALL TITANIUM DIOXIDE MARKET IN 2020 (IN TERMS OF VOLUME)

TABLE 46 TITANIUM DIOXIDE MARKET, BY GRADE, 2019–2026 (KILOTON)

TABLE 47 TITANIUM DIOXIDE MARKET, BY GRADE, 2019–2026 (USD MILLION) 6.2 RUTILE

6.2.1 GROWING USE OF RUTILE TITANIUM DIOXIDE IN PAINTS AND COATINGS OWING TO IMPROVED ABILITY TO SCATTER LIGHT IN PAINT FILMS TABLE 48 TITANIUM DIOXIDE MARKET FOR RUTILE, BY REGION, 2019–2026 (KILOTON)

TABLE 49 TITANIUM DIOXIDE MARKET FOR RUTILE, BY REGION, 2019–2026 (USD MILLION)

6.3 ANATASE

6.3.1 INCREASING UTILIZATION OF ANATASE-GRADE TITANIUM DIOXIDE IN PHOTOCATALYTIC APPLICATIONS

TABLE 50 TITANIUM DIOXIDE MARKET FOR ANATASE, BY REGION, 2019–2026 (KILOTON)

TABLE 51 TITANIUM DIOXIDE MARKET FOR ANATASE, BY REGION, 2019–2026 (USD MILLION)

## 7 TITANIUM DIOXIDE MARKET, BY PROCESS

#### 7.1 INTRODUCTION



TABLE 52 TITANIUM DIOXIDE PRODUCTION CAPACITY OF MAJOR PLAYERS, BY PROCESS TYPE, 2020

FIGURE 34 SULFATE PROCESS ACCOUNTED FOR LARGEST SHARE OF OVERALL MARKET FOR TITANIUM DIOXIDE IN 2020 (IN TERMS OF VOLUME) TABLE 53 TITANIUM DIOXIDE MARKET, BY PROCESS, 2019–2026 (KILOTON) 7.2 CHLORIDE

7.2.1 REQUIREMENT FOR HIGH-PURITY TITANIUM DIOXIDE TO FUEL DEMAND TABLE 54 TITANIUM DIOXIDE MARKET FOR CHLORIDE PROCESS, BY REGION, 2019–2026 (KILOTON)

7.3 SULFATE

7.3.1 DECLINE IN USE OF SULFATE PROCESS OWING TO ITS DRAWBACKS TO IMPACT MARKET GROWTH

TABLE 55 TITANIUM MARKET FOR SULFATE PROCESS, BY REGION, 2019–2026 (KILOTON)

## **8 TITANIUM DIOXIDE MARKET, BY APPLICATION**

#### 8.1 INTRODUCTION

FIGURE 35 PAINTS & COATINGS ACCOUNTED FOR LARGEST SHARE OF OVERALL TITANIUM DIOXIDE MARKET IN 2020 (IN TERMS OF VOLUME)
TABLE 56 TITANIUM DIOXIDE MARKET, BY APPLICATION, 2019–2026 (KILOTON)
TABLE 57 TITANIUM DIOXIDE MARKET, BY APPLICATION, 2019–2026 (USD MILLION)

- 8.1.1 PAINTS & COATINGS
- 8.1.1.1 Measurable increase in DIY paint and coating market amid pandemic drives demand for titanium dioxide in paints and coatings applications

TABLE 58 TITANIUM DIOXIDE MARKET FOR PAINTS & COATINGS, BY REGION, 2019–2026 (KILOTON)

TABLE 59 TITANIUM DIOXIDE MARKET FOR PAINTS & COATINGS, BY REGION, 2019–2026 (USD MILLION)

- 8.1.2 PLASTICS
- 8.1.2.1 Significant growth in packaging industry to foster demand for titanium dioxide for plastics applications

TABLE 60 TITANIUM DIOXIDE MARKET FOR PLASTICS, BY REGION, 2019–2026 (KILOTON)

TABLE 61 TITANIUM DIOXIDE MARKET FOR PLASTICS, BY REGION, 2019–2026 (USD MILLION)

- 8.1.3 PAPER
  - 8.1.3.1 Increased demand for decorative paper to fuel titanium dioxide market growth



for paper applications

TABLE 62 TITANIUM DIOXIDE MARKET FOR PAPER, BY REGION, 2019–2026 (KILOTON)

TABLE 63 TITANIUM DIOXIDE MARKET FOR PAPER, BY REGION, 2019–2026 (USD MILLION)

8.1.4 INKS

8.1.4.1 Considerable increase in demand for titanium dioxide from APAC for inks applications to foster market growth

TABLE 64 TITANIUM DIOXIDE MARKET FOR INKS, BY REGION, 2019–2026 (KILOTON)

TABLE 65 TITANIUM DIOXIDE MARKET FOR INKS, BY REGION, 2019–2026 (USD MILLION)

**8.1.5 OTHERS** 

TABLE 66 TITANIUM DIOXIDE MARKET FOR OTHER APPLICATIONS, BY REGION, 2019–2026 (KILOTON)

TABLE 67 TITANIUM DIOXIDE MARKET FOR OTHER APPLICATIONS, BY REGION, 2019–2026 (USD MILLION)

## 9 TITANIUM DIOXIDE MARKET, BY REGION

#### 9.1 INTRODUCTION

FIGURE 36 REGIONAL SNAPSHOT: ASIA PACIFIC EMERGING AS NEW HOTSPOT TABLE 68 TITANIUM DIOXIDE MARKET, BY REGION, 2019–2026 (KILOTON)
TABLE 69 TITANIUM DIOXIDE MARKET, BY REGION, 2019–2026 (USD MILLION)
9.2 NORTH AMERICA

FIGURE 37 TITANIUM DIOXIDE MARKET SNAPSHOT IN NORTH AMERICA: US TO LEAD TITANIUM DIOXIDE MARKET IN NORTH AMERICA

TABLE 70 TITANIUM DIOXIDE MARKET IN NORTH AMERICA, BY COUNTRY, 2019–2026 (KILOTON)

TABLE 71 TITANIUM DIOXIDE MARKET IN NORTH AMERICA, BY COUNTRY, 2019–2026 (USD MILLION)

TABLE 72 TITANIUM DIOXIDE MARKET IN NORTH AMERICA, BY PROCESS, 2019–2026 (KILOTON)

TABLE 73 TITANIUM DIOXIDE MARKET IN NORTH AMERICA, BY GRADE, 2019–2026 (KILOTON)

TABLE 74 TITANIUM DIOXIDE MARKET IN NORTH AMERICA, BY GRADE, 2019–2026 (USD MILLION)

TABLE 75 TITANIUM DIOXIDE MARKET IN NORTH AMERICA, BY APPLICATION, 2019–2026 (KILOTON)



TABLE 76 TITANIUM DIOXIDE MARKET IN NORTH AMERICA, BY APPLICATION, 2019–2026 (USD MILLION)

9.2.1 US

9.2.1.1 Thriving end-user industries, such as construction and cosmetics in country, to drive demand for titanium dioxide

TABLE 77 TITANIUM DIOXIDE MARKET IN US, BY GRADE, 2019–2026 (KILOTON) TABLE 78 TITANIUM DIOXIDE MARKET IN US, BY GRADE, 2019–2026 (USD MILLION)

TABLE 79 TITANIUM DIOXIDE MARKET IN US, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 80 TITANIUM DIOXIDE MARKET IN US, BY APPLICATION, 2019–2026 (USD MILLION)

9.2.2 CANADA

9.2.2.1 Increasing investment in construction projects to propel titanium dioxide market growth

FIGURE 38 SHIPMENT-, IMPORT-, AND EXPORT-RELATED STATISTICAL DATA FOR CHEMICALS AND PAINTS, COATINGS, AND ADHESIVES INDUSTRIES, 2015–2019

TABLE 81 TITANIUM DIOXIDE MARKET IN CANADA, BY GRADE, 2019–2026 (KILOTON)

TABLE 82 TITANIUM DIOXIDE MARKET IN CANADA, BY GRADE, 2019–2026 (USD MILLION)

TABLE 83 TITANIUM DIOXIDE MARKET IN CANADA, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 84 TITANIUM DIOXIDE MARKET IN CANADA, BY APPLICATION, 2019–2026 (USD MILLION)

**9.2.3 MEXICO** 

9.2.3.1 Booming construction sector to drive demand for titanium dioxide in Mexico TABLE 85 TITANIUM DIOXIDE MARKET IN MEXICO, BY GRADE, 2019–2026 (KILOTON)

TABLE 86 TITANIUM DIOXIDE MARKET IN MEXICO, BY GRADE, 2019–2026 (USD MILLION)

TABLE 87 TITANIUM DIOXIDE MARKET IN MEXICO, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 88 TITANIUM DIOXIDE MARKET IN MEXICO, BY APPLICATION, 2019–2026 (USD MILLION)

9.3 EUROPE

TABLE 89 TITANIUM DIOXIDE MARKET IN EUROPE, BY COUNTRY, 2019–2026 (KILOTON)



TABLE 90 TITANIUM DIOXIDE MARKET IN EUROPE, BY COUNTRY, 2019–2026 (USD MILLION)

TABLE 91 TITANIUM DIOXIDE MARKET IN EUROPE, BY PROCESS, 2019–2026 (KILOTON)

TABLE 92 TITANIUM DIOXIDE MARKET IN EUROPE, BY GRADE, 2019–2026 (KILOTON)

TABLE 93 TITANIUM DIOXIDE MARKET IN EUROPE, BY GRADE, 2019–2026 (USD MILLION)

TABLE 94 TITANIUM DIOXIDE MARKET IN EUROPE, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 95 TITANIUM DIOXIDE MARKET IN EUROPE, BY APPLICATION, 2019–2026 (USD MILLION)

9.3.1 GERMANY

9.3.1.1 Favorable economic environment for construction sector to foster market growth

TABLE 96 TITANIUM DIOXIDE MARKET IN GERMANY, BY GRADE, 2019–2026 (KILOTON)

TABLE 97 TITANIUM DIOXIDE MARKET IN GERMANY, BY GRADE, 2019–2026 (USD MILLION)

TABLE 98 TITANIUM DIOXIDE MARKET IN GERMANY, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 99 TITANIUM DIOXIDE MARKET IN GERMANY, BY APPLICATION, 2019–2026 (USD MILLION)

9.3.2 UK

9.3.2.1 Significant increase in use of decorative coatings and paints to fuel demand for titanium dioxide

FIGURE 39 SALES OF PAINTS & COATINGS AND PRINTING INKS, 2019 (USD MILLION)

TABLE 100 TITANIUM DIOXIDE MARKET IN UK, BY GRADE, 2019–2026 (KILOTON) TABLE 101 TITANIUM DIOXIDE MARKET IN UK, BY GRADE, 2019–2026 (USD MILLION)

TABLE 102 TITANIUM DIOXIDE MARKET IN UK, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 103 TITANIUM DIOXIDE MARKET IN UK, BY APPLICATION, 2019–2026 (USD MILLION)

**9.3.3 FRANCE** 

9.3.3.1 Strong preference for DIY environmentally friendly coatings to spur growth of market for paints and coatings applications

TABLE 104 TITANIUM DIOXIDE MARKET FRANCE, BY GRADE, 2019–2026



(KILOTON)

TABLE 105 TITANIUM DIOXIDE MARKET FRANCE, BY GRADE, 2019–2026 (USD MILLION)

TABLE 106 TITANIUM DIOXIDE MARKET IN FRANCE, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 107 TITANIUM DIOXIDE MARKET IN FRANCE, BY APPLICATION, 2019–2026 (USD MILLION)

**9.3.4 RUSSIA** 

9.3.4.1 Steady development in construction sector to support titanium dioxide market growth

TABLE 108 TITANIUM DIOXIDE MARKET IN RUSSIA, BY GRADE, 2019–2026 (KILOTON)

TABLE 109 TITANIUM DIOXIDE MARKET IN RUSSIA, BY GRADE, 2019–2026 (USD MILLION)

TABLE 110 TITANIUM DIOXIDE MARKET IN RUSSIA, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 111 TITANIUM DIOXIDE MARKET IN RUSSIA, BY APPLICATION, 2019–2026 (USD MILLION)

9.3.5 ITALY

9.3.5.1 Increased use of titanium dioxide as photocatalyst in construction sector boosts market growth

TABLE 112 TITANIUM DIOXIDE MARKET IN ITALY, BY GRADE, 2019–2026 (KILOTON)

TABLE 113 TITANIUM DIOXIDE MARKET IN ITALY, BY GRADE, 2019–2026 (USD MILLION)

TABLE 114 TITANIUM DIOXIDE MARKET IN ITALY, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 115 TITANIUM DIOXIDE MARKET IN ITALY, BY APPLICATION, 2019–2026 (USD MILLION)

9.3.6 REST OF EUROPE

TABLE 116 TITANIUM DIOXIDE MARKET IN REST OF EUROPE, BY GRADE, 2019–2026 (KILOTON)

TABLE 117 TITANIUM DIOXIDE MARKET IN REST OF EUROPE, BY GRADE, 2019–2026 (USD MILLION)

TABLE 118 TITANIUM DIOXIDE MARKET IN REST OF EUROPE, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 119 TITANIUM DIOXIDE MARKET IN REST OF EUROPE, BY APPLICATION, 2019–2026 (USD MILLION)

**9.4 APAC** 



FIGURE 40 TITANIUM DIOXIDE MARKET SNAPSHOT IN APAC: CHINA & INDIA TO LEAD TITANIUM DIOXIDE MARKET

TABLE 120 TITANIUM DIOXIDE MARKET IN APAC, BY COUNTRY, 2019–2026 (KILOTON)

TABLE 121 TITANIUM DIOXIDE MARKET IN APAC, BY COUNTRY, 2019–2026 (USD MILLION)

TABLE 122 TITANIUM DIOXIDE MARKET IN APAC, BY PROCESS, 2019–2026 (KILOTON)

TABLE 123 TITANIUM DIOXIDE MARKET IN APAC, BY GRADE, 2019–2026 (KILOTON)

TABLE 124 TITANIUM DIOXIDE MARKET IN APAC, BY GRADE, 2019–2026 (USD MILLION)

TABLE 125 TITANIUM DIOXIDE MARKET IN APAC, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 126 TITANIUM DIOXIDE MARKET IN APAC, BY APPLICATION, 2019–2026 (USD MILLION)

9.4.1 CHINA

9.4.1.1 Chloride process preferred for titanium dioxide production in China TABLE 127 TITANIUM DIOXIDE MARKET IN CHINA, BY GRADE, 2019–2026 (KILOTON)

TABLE 128 TITANIUM DIOXIDE MARKET IN CHINA , BY GRADE, 2019–2026 (USD MILLION)

TABLE 129 TITANIUM DIOXIDE MARKET IN CHINA, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 130 TITANIUM DIOXIDE MARKET IN CHINA, BY APPLICATION, 2019–2026 (USD MILLION)

9.4.2 INDIA

9.4.2.1 Make in India initiative to drive demand for titanium dioxide-infused coatings for industrial applications

TABLE 131 TITANIUM DIOXIDE MARKET IN INDIA, BY GRADE, 2019–2026 (KILOTON)

TABLE 132 TITANIUM DIOXIDE MARKET IN INDIA, BY GRADE, 2019–2026 (USD MILLION)

TABLE 133 TITANIUM DIOXIDE MARKET IN INDIA, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 134 TITANIUM DIOXIDE MARKET IN INDIA, BY APPLICATION, 2019–2026 (USD MILLION)

9.4.3 JAPAN

9.4.3.1 Increased demand for titanium dioxide pigments for automotive coating



applications to augment market growth

FIGURE 41 PRODUCTION & CONSUMPTION OF PAINTS AND PRODUCTION OF GENERAL AND PRINTING INKS, 2016–2020 (TONS)

TABLE 135 TITANIUM DIOXIDE MARKET IN JAPAN, BY GRADE, 2019–2026 (KILOTON)

TABLE 136 TITANIUM DIOXIDE MARKET IN JAPAN, BY GRADE, 2019–2026 (USD MILLION)

TABLE 137 TITANIUM DIOXIDE MARKET IN JAPAN, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 138 TITANIUM DIOXIDE MARKET IN JAPAN, BY APPLICATION, 2019–2026 (USD MILLION)

9.4.4 SOUTH KOREA

9.4.4.1 Deliberate investments by government into manufacturing segment to drive demand for coatings in industrial applications

TABLE 139 TITANIUM DIOXIDE MARKET IN SOUTH KOREA, BY GRADE, 2019–2026 (KILOTON)

TABLE 140 TITANIUM DIOXIDE MARKET IN SOUTH KOREA, BY GRADE, 2019–2026 (USD MILLION)

TABLE 141 TITANIUM DIOXIDE MARKET IN SOUTH KOREA, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 142 TITANIUM DIOXIDE MARKET IN SOUTH KOREA, BY APPLICATION, 2019–2026 (USD MILLION)

9.4.5 AUSTRALIA

9.4.5.1 High feedstock availability for manufacturing titanium dioxide supports market growth in Australia

TABLE 143 TITANIUM DIOXIDE MARKET IN AUSTRALIA, BY GRADE, 2019–2026 (KILOTON)

TABLE 144 TITANIUM DIOXIDE MARKET IN AUSTRALIA, BY GRADE, 2019–2026 (USD MILLION)

TABLE 145 TITANIUM DIOXIDE MARKET IN AUSTRALIA, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 146 TITANIUM DIOXIDE MARKET IN AUSTRALIA, BY APPLICATION, 2019–2026 (USD MILLION)

9.4.6 REST OF APAC

TABLE 147 TITANIUM DIOXIDE MARKET IN REST OF APAC, BY GRADE, 2019–2026 (KILOTON)

TABLE 148 TITANIUM DIOXIDE MARKET IN REST OF APAC, BY GRADE, 2019–2026 (USD MILLION)

TABLE 149 TITANIUM DIOXIDE MARKET IN REST OF APAC, BY APPLICATION,



2019-2026 (KILOTON)

TABLE 150 TITANIUM DIOXIDE MARKET IN REST OF APAC, BY APPLICATION, 2019–2026 (USD MILLION)

9.5 MIDDLE EAST AND AFRICA (MEA)

TABLE 151 TITANIUM DIOXIDE MARKET IN MIDDLE EAST & AFRICA, BY COUNTRY, 2019–2026 (KILOTON)

TABLE 152 TITANIUM DIOXIDE MARKET IN MIDDLE EAST & AFRICA, BY COUNTRY, 2019–2026 (USD MILLION)

TABLE 153 TITANIUM DIOXIDE MARKET IN MIDDLE EAST & AFRICA, BY PROCESS, 2019–2026 (KILOTON)

TABLE 154 TITANIUM DIOXIDE MARKET IN MIDDLE EAST & AFRICA, BY GRADE, 2019–2026 (KILOTON)

TABLE 155 TITANIUM DIOXIDE MARKET IN MIDDLE EAST & AFRICA, BY GRADE, 2019–2026 (USD MILLION)

TABLE 156 TITANIUM DIOXIDE MARKET IN MIDDLE EAST & AFRICA, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 157 TITANIUM DIOXIDE MARKET IN MIDDLE EAST & AFRICA, BY APPLICATION, 2019–2026 (USD MILLION)

#### 9.5.1 SAUDI ARABIA

9.5.1.1 Vision 2030 and other infrastructure development projects initiated by Saudi Arabian government to spike demand for titanium dioxide

FIGURE 42 VARIATION IN PRODUCTION OUTPUT IN SAUDI ARABIA FOR FIRST HALF OF 2020 VS. FIRST HALF OF 2019, BY INDUSTRY (%)

TABLE 158 TITANIUM DIOXIDE MARKET IN SAUDI ARABIA, BY GRADE, 2019–2026 (KILOTON)

TABLE 159 TITANIUM DIOXIDE MARKET IN SAUDI ARABIA, BY GRADE, 2019–2026 (USD MILLION)

TABLE 160 TITANIUM DIOXIDE MARKET IN SAUDI ARABIA, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 161 TITANIUM DIOXIDE MARKET IN SAUDI ARABIA, BY APPLICATION, 2019–2026 (USD MILLION)

9.5.2 UAE

9.5.2.1 Strong focus of country on infrastructure development projects to spur demand for titanium dioxide

TABLE 162 TITANIUM DIOXIDE MARKET IN UAE, BY GRADE, 2019–2026 (KILOTON)

TABLE 163 TITANIUM DIOXIDE MARKET IN UAE, BY GRADE, 2019–2026 (USD MILLION)

TABLE 164 TITANIUM DIOXIDE MARKET IN UAE, BY APPLICATION, 2019-2026



(KILOTON)

TABLE 165 TITANIUM DIOXIDE MARKET IN UAE, BY APPLICATION, 2019–2026 (USD MILLION)

9.5.3 SOUTH AFRICA

9.5.3.1 High titanium content feedstocks in region to propel market growth TABLE 166 TITANIUM DIOXIDE MARKET IN SOUTH AFRICA, BY GRADE,

2019-2026 (KILOTON)

TABLE 167 TITANIUM DIOXIDE MARKET IN SOUTH AFRICA, BY GRADE, 2019–2026 (USD MILLION)

TABLE 168 ITANIUM DIOXIDE MARKET IN SOUTH AFRICA, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 169 TITANIUM DIOXIDE MARKET IN SOUTH AFRICA, BY APPLICATION, 2019–2026 (USD MILLION)

9.5.4 REST OF MIDDLE EAST & AFRICA

TABLE 170 TITANIUM DIOXIDE MARKET IN REST OF MIDDLE EAST & AFRICA, BY GRADE, 2019–2026 (KILOTON)

TABLE 171 TITANIUM DIOXIDE MARKET IN REST OF MIDDLE EAST & AFRICA, BY GRADE, 2019–2026 (USD MILLION)

TABLE 172 TITANIUM DIOXIDE MARKET IN REST OF MIDDLE EAST & AFRICA, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 173 TITANIUM DIOXIDE MARKET REST OF MIDDLE EAST & AFRICA, BY APPLICATION, 2019–2026 (USD MILLION)

9.6 SOUTH AMERICA

TABLE 174 TITANIUM DIOXIDE MARKET IN SOUTH AMERICA, BY COUNTRY, 2019–2026 (KILOTON)

TABLE 175 TITANIUM DIOXIDE MARKET IN SOUTH AMERICA, BY COUNTRY, 2019–2026 (USD MILLION)

TABLE 176 TITANIUM DIOXIDE MARKET IN SOUTH AMERICA, BY PROCESS, 2019–2026 (KILOTON)

TABLE 177 TITANIUM DIOXIDE MARKET IN SOUTH AMERICA, BY GRADE, 2019–2026 (KILOTON)

TABLE 178 TITANIUM DIOXIDE MARKET IN SOUTH AMERICA, BY GRADE, 2019–2026 (USD MILLION)

TABLE 179 TITANIUM DIOXIDE MARKET IN SOUTH AMERICA, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 180 TITANIUM DIOXIDE MARKET IN SOUTH AMERICA, BY APPLICATION, 2019–2026 (USD MILLION)

9.6.1 BRAZIL

9.6.1.1 Rapid urbanization in Brazil to promote construction engineering activities



TABLE 181 TITANIUM DIOXIDE MARKET IN BRAZIL, BY GRADE, 2019–2026 (KILOTON)

TABLE 182 TITANIUM DIOXIDE MARKET IN BRAZIL, BY GRADE, 2019–2026 (USD MILLION)

TABLE 183 TITANIUM DIOXIDE MARKET IN BRAZIL, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 184 TITANIUM DIOXIDE MARKET IN BRAZIL, BY APPLICATION, 2019–2026 (USD MILLION)

9.6.2 ARGENTINA

9.6.2.1 Booming construction industry to support titanium dioxide market growth TABLE 185 TITANIUM DIOXIDE MARKET IN ARGENTINA, BY GRADE, 2019–2026 (KILOTON)

TABLE 186 TITANIUM DIOXIDE MARKET IN ARGENTINA, BY GRADE, 2019–2026 (USD MILLION)

TABLE 187 TITANIUM DIOXIDE MARKET IN ARGENTINA, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 188 TITANIUM DIOXIDE MARKET IN ARGENTINA, BY APPLICATION, 2019–2026 (USD MILLION)

9.6.3 REST OF SOUTH AMERICA

TABLE 189 TITANIUM DIOXIDE MARKET IN REST OF SOUTH AMERICA, BY GRADE, 2019–2026 (KILOTON)

TABLE 190 TITANIUM DIOXIDE MARKET IN REST OF SOUTH AMERICA, BY GRADE, 2019–2026 (USD MILLION)

TABLE 191 TITANIUM DIOXIDE MARKET IN REST OF SOUTH AMERICA, BY APPLICATION, 2019–2026 (KILOTON)

TABLE 192 TITANIUM DIOXIDE MARKET IN REST OF SOUTH AMERICA, BY APPLICATION, 2019–2026 (USD MILLION)

#### 10 COMPETITIVE LANDSCAPE

**10.1 INTRODUCTION** 

FIGURE 43 OVERVIEW OF STRATEGIES ADOPTED BY KEY PLAYERS BETWEEN

#### 2018 AND 2021

10.2 REVENUE ANALYSIS

FIGURE 44 REVENUE ANALYSIS OF TOP 5 COMPANIES FROM 2016 TO 2020 10.3 MARKET SHARE ANALYSIS

FIGURE 45 MARKET SHARE OF KEY PLAYERS, 2020 (BY PRODUCTION



## CAPACITY)

10.3.1 STRATEGIC POSITIONING OF KEY PLAYERS

10.3.2 COMPANY EVALUATION MATRIX DEFINITION AND TECHNOLOGY

10.3.2.1 Star

10.3.2.2 Emerging leader

10.3.2.3 pervasive

10.3.2.4 Participant

FIGURE 46 COMPANY EVALUATION QUADRANT, 2020

10.3.3 SMALL AND MEDIUM-SIZED ENTERPRISES (SME) EVALUATION MATRIX

10.3.3.1 Progressive companies

10.3.3.2 Responsive companies

10.3.3.3 Dynamic companies

10.3.3.4 Starting blocks

FIGURE 47 START-UPS AND SMALL AND MEDIUM-SIZED ENTERPRISES (SMES) EVALUATION MATRIX. 2020

10.4 RANKING ANALYSIS OF KEY MARKET PLAYERS, 2020

FIGURE 48 RANKING ANALYSIS OF TOP FIVE PLAYERS IN TITANIUM DIOXIDE MARKET, 2020

10.5 COMPETITIVE BENCHMARKING

10.5.1 COMPANY PRODUCT FOOTPRINT

10.5.2 COMPANY APPLICATION FOOTPRINT

10.5.3 COMPANY REGION FOOTPRINT

10.6 COMPETITIVE SCENARIO AND TRENDS

10.6.1 MARKET EVALUATION FRAMEWORK

TABLE 193 MARKET EVALUATION FRAMEWORK (2018–2021)

10.6.2 EXPANSION

TABLE 194 EXPANSION, 2018-2021

10.6.3 AGREEMENT

TABLE 195 AGREEMENT, 2018-2021

10.6.4 DEALS

TABLE 196 DEALS, 2018-2021

## 11 COMPANY PROFILES

(Business Overview, Products Offered, Recent Developments, SWOT Analysis, MnM View)\*

11.1 MAJOR PLAYERS

11.1.1 THE CHEMOURS COMPANY

FIGURE 49 THE CHEMOURS COMPANY: COMPANY SNAPSHOT



11.1.2 TRONOX HOLDINGS PLC

FIGURE 50 TRONOX HOLDINGS PLC: COMPANY SNAPSHOT

11.1.3 LOMON BILLIONS GROUP

FIGURE 51 LOMON BILLIONS GROUP: COMPANY SNAPSHOT

11.1.4 VENATOR MATERIALS PLC

FIGURE 52 VENATOR MATERIALS PLC: COMPANY SNAPSHOT

11.1.5 KRONOS WORLDWIDE, INC.

FIGURE 53 KRONOS WORLDWIDE INC.: COMPANY SNAPSHOT

11.1.6 INEOS GROUP LTD

FIGURE 54 INEOS GROUP LTD: COMPANY SNAPSHOT

11.1.7 CINKARNA CELJE DD.

FIGURE 55 CINKARNA CELJE DD: COMPANY SNAPSHOT

11.1.8 EVONIK INDUSTRIES AG

FIGURE 56 EVONIK INDUSTRIES AG: COMPANY SNAPSHOT

11.1.9 TAYCA CORPORATION

FIGURE 57 TAYCA CORPORATION: COMPANY SNAPSHOT

11.1.10 ILUKA RESOURCES

FIGURE 58 ILUKA RESOURCES: COMPANY SNAPSHOT

11.2 OTHER PLAYERS

11.2.1 ISHIHARA SANGYO KAISHA, LTD.

FIGURE 59 ISHIHARA SANGYO KAISHA, LTD.: COMPANY SNAPSHOT

11.2.2 SHANGHAI JIUTA CHEMICAL CO. LTD.

11.2.3 GRUPA AZOTY SA.

FIGURE 60 GRUPA AZOTY SA: COMPANY SNAPSHOT

11.2.4 SWASTIK INTERCHEM PRIVATE LIMITED

11.2.5 KISH COMPANY, INC

11.2.6 PRECHEZA A. S.

11.2.6.2 PRECHEZA a. s.: Business overview

11.2.7 CNNC HUA YUAN TITANIUM DIOXIDE CO., LTD

11.2.8 TRAVANCORE TITANIUM PRODUCTS LTD.

11.2.9 SHANDONG JINHAI TITANIUM RESOURCES TECHNOLOGY CO., LTD.

11.2.9.3 Products offered

11.2.10 GUANGDONG HUI YUN TITANIUM INDUSTRY CORPORATION LIMITED

11.2.11 GPRO TITANIUM INDUSTRY CO., LTD.

11.2.12 TITANOS GROUP

\*Details on Business Overview, Products Offered, Recent Developments, SWOT Analysis, MnM View might not be captured in case of unlisted companies.

## **12 APPENDIX**



- 12.1 DISCUSSION GUIDE
- 12.2 KNOWLEDGE STORE: MARKETSANDMARKETS SUBSCRIPTION PORTAL
- 12.3 AVAILABLE CUSTOMIZATIONS
- 12.4 RELATED REPORTS
- 12.5 AUTHOR DETAILS



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