

# Refinery Catalysts Market by Type (FCC Catalysts, Hydrotreating Catalysts, Hydrocracking Catalysts, Catalytic Reforming Catalysts), Ingredients (Zeolites, Metals, Chemical Compounds), and Region - Global Forecast to 2029

https://marketpublishers.com/r/G12FCCD85A7EN.html

Date: August 2024

Pages: 222

Price: US\$ 4,950.00 (Single User License)

ID: G12FCCD85A7EN

# **Abstracts**

The Refinery catalysts market is projected to reach USD 6.8 billion by 2029, at a CAGR of 4.0% from USD 5.6 billion in 2024. Refinery catalysts are used in refineries to produce high quality fuels with low emissions. Their ability to remove impurities and lower sulfur content along with enhancing the chemical processes makes them useful for refining applications. In the oil refineries, refinery catalysts are used to aid the chemical reactions to upgrade oil products by reducing the content of nitrogen, metals, sulfur, carbon, aromatics and other impurities from feedstock.

"Based on ingredient, zeolites are expected to be the fastest growing market during the forecast period, in terms of value."

Zeolites ingredients are the fastest growing in refinery catalysts due to their high acid strength which is vital for catalysing various reactions such as cracking, isomerization, and alkylation. They are generally stable at high temperatures making the appropriate for industrial applications. Zeolites can be utilized through ion exchange and chemical modifications to improve their catalytic properties for specific reactions like petroleum refining, oil production and environmental applications.

"Based on type, FCC Catalysts is the largest market during the forecast period, in terms of value."

FCC Catalysts constitute the largest market in refineries market. These catalysts create new and smaller molecules from larger molecules to make gasoline and distillate fuels. They help in lowering sulfur content get high octane numbers, low NOx emissions, and low levels of carbon monoxide. FCC catalysts aid in conversion process and mitigate severe operating conditions. This helps to maximize the yield of high-quality products



from crude oil. They are very versatile and can process a wide range of feed stocks making them suitable for various refinery operations.

"Based on region, North America is the second largest market for refinery catalysts during the forecast period, in terms of value."

The refinery catalyst market in North America has witnessed robust growth driven by need for efficient refinery processes, strict environmental regulations regarding emissions and fuel quality. The region has high number of oil reserves and requires refinery catalysts in order to meet the increasing demand of refined petroleum products while adhering to mandates for high quality and environmental regulations. In the process of determining and verifying the market size for several segments and subsegments identified through secondary research, extensive primary interviews were conducted. A breakdown of the profiles of the primary interviewees are as follows:

By Company Type: Tier 1 - 35%, Tier 2 - 45%, and Tier 3 - 20%

By Designation: C-Level - 35%, Director Level - 25%, and Others - 40%

By Region: North America - 30%, Europe - 20%, Asia Pacific - 40%, Middle East & Africa-5%, and Latin America-5%

The key players in this market are Albemarle Corporation (US), W R Grace (US), BASF (Germany), Haldor Topsoe (Denmark), Honeywell UOP (US), Clariant (Switzerland), Axens (France), Johnson Matthey (UK), China Petroleum and Chemical Corporation (Sinopec) (China), and Shell Catalyst & Technologies (Netherlands). Research Coverage

This report segments the refinery catalysts market based on type, ingredients, and region, and provides estimations for the overall value of the market across various regions. A detailed analysis of key industry players has been conducted to provide insights into their business overviews, products and services, key strategies, new product launches, expansions, and mergers and acquisitions associated with the refinery catalysts market.

Key benefits of buying this report

This research report focuses on various levels of analysis, including industry analysis (industry trends), market ranking analysis of top players, and company profiles, which together provide an overall view of the competitive landscape, emerging and high-growth segments of the refinery catalysts market, high-growth regions, and market drivers, restraints, opportunities, and challenges.

The report provides insights on the following pointers:



Analysis of key drivers (Increasing demand for cleaner fuels,), restraints (Availability of substitute materials), opportunities (Shift towards renewable fuels) and challenges (Volatile prices of precious group metals).

Market Penetration: Comprehensive information on the refinery catalysts market offered by top players in the global refinery catalysts market.

Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product launches in the refinery catalysts market.

Market Development: Comprehensive information about lucrative emerging markets — the report analyzes the markets for refinery catalysts market across regions.

Market Diversification: Exhaustive information about new products, untapped regions, and recent developments in the global refinery catalysts market

Competitive Assessment: In-depth assessment of market shares, strategies, products, and manufacturing capabilities of leading players in the refinery catalysts market



# **Contents**

### 1 INTRODUCTION

- 1.1 STUDY OBJECTIVES
- 1.2 MARKET DEFINITION
- 1.3 STUDY SCOPE
  - 1.3.1 MARKETS COVERED
  - 1.3.2 INCLUSIONS & EXCLUSIONS OF STUDY
  - 1.3.3 YEARS CONSIDERED
- 1.4 CURRENCY CONSIDERED
- 1.5 UNITS CONSIDERED
- 1.6 STAKEHOLDERS
- 1.7 SUMMARY OF CHANGES

### **2 RESEARCH METHODOLOGY**

- 2.1 RESEARCH DATA
  - 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 Primary interviews from demand and supply sides
    - 2.1.2.3 Key industry insights
    - 2.1.2.4 Breakdown of primary interviews
- 2.2 MARKET SIZE ESTIMATION
  - 2.2.1 BOTTOM-UP APPROACH
  - 2.2.2 TOP-DOWN APPROACH
- 2.3 FORECAST NUMBER CALCULATION
- 2.4 DATA TRIANGULATION
- 2.5 FACTOR ANALYSIS
- 2.6 ASSUMPTIONS
- 2.7 LIMITATIONS & RISKS ASSOCIATED WITH REFINERY CATALYSTS MARKET

### **3 EXECUTIVE SUMMARY**

### **4 PREMIUM INSIGHTS**

# 4.1 ATTRACTIVE OPPORTUNITIES FOR PLAYERS IN REFINERY CATALYSTS



### **MARKET**

- 4.2 REFINERY CATALYSTS MARKET, BY INGREDIENT, 2024 VS. 2029 (KILOTON)
- 4.3 REFINERY CATALYSTS MARKET, BY TYPE, 2024 VS. 2029 (KILOTON)
- 4.4 REFINERY CATALYSTS MARKET, BY COUNTRY

### **5 MARKET OVERVIEW**

- 5.1 INTRODUCTION
- 5.2 MARKET DYNAMICS
  - 5.2.1 DRIVERS
    - 5.2.1.1 Increasing demand for cleaner fuels
    - 5.2.1.2 High octane number requirement
    - 5.2.1.3 Technological advancements
  - 5.2.2 RESTRAINTS
  - 5.2.2.1 Availability of substitute materials
  - 5.2.2.2 Declining crude oil reserves
  - 5.2.3 OPPORTUNITIES
    - 5.2.3.1 Shift toward renewable fuels
    - 5.2.3.2 Backward integration by major refinery catalyst manufacturers
  - 5.2.4 CHALLENGES
    - 5.2.4.1 Volatile prices of precious group metals
    - 5.2.4.2 Rise of electric vehicles
- 5.3 PORTER'S FIVE FORCES ANALYSIS
  - 5.3.1 THREAT OF SUBSTITUTES
  - 5.3.2 BARGAINING POWER OF SUPPLIERS
  - 5.3.3 THREAT OF NEW ENTRANTS
  - 5.3.4 BARGAINING POWER OF BUYERS
  - 5.3.5 INTENSITY OF COMPETITIVE RIVALRY
- 5.4 KEY STAKEHOLDERS AND BUYING CRITERIA
  - 5.4.1 KEY STAKEHOLDERS IN BUYING PROCESS
  - 5.4.2 QUALITY
  - 5.4.3 SERVICE
- 5.5 VALUE CHAIN ANALYSIS
  - 5.5.1 RAW MATERIAL SOURCING
  - 5.5.2 MANUFACTURING
  - 5.5.3 DISTRIBUTION
  - 5.5.4 END USERS
- 5.6 ECOSYSTEM
- 5.7 TECHNOLOGY ANALYSIS



### 5.7.1 KEY TECHNOLOGIES

- 5.7.1.1 Nanotechnology
- 5.7.1.2 Bimetallic catalyst technology
- 5.7.2 COMPLEMENTARY TECHNOLOGIES
  - 5.7.2.1 Al & machine learning integration
- 5.8 KEY CONFERENCES AND EVENTS, 2024-2025
- 5.9 REGULATORY LANDSCAPE
  - 5.9.1 REGULATIONS
  - 5.9.2 NORTH AMERICA
  - 5.9.3 ASIA PACIFIC
  - **5.9.4 EUROPE**
- 5.9.5 REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER

# ORGANIZATIONS

- 5.10 TRADE ANALYSIS
  - 5.10.1 IMPORT TRADE ANALYSIS: HS CODE 381511
  - 5.10.2 EXPORT TRADE ANALYSIS: HS CODE 381511
  - 5.10.3 IMPORT TRADE ANALYSIS: HS CODE 381512
  - 5.10.4 EXPORT TRADE ANALYSIS: HS CODE 381512
  - 5.10.5 IMPORT TRADE ANALYSIS: HS CODE 381519
  - 5.10.6 EXPORT TRADE ANALYSIS: HS CODE 381519
- 5.11 INVESTMENT AND FUNDING SCENARIO
- 5.12 CASE STUDY
  - 5.12.1 SELECTIVE CATALYTIC REDUCTION
  - 5.12.2 BASF TECHNOLOGY CLEANS UP BOSTON'S BIG DIG PROJECT
- 5.13 MACROECONOMIC INDICATORS
  - 5.13.1 GDP TRENDS AND FORECASTS
  - 5.13.2 GLOBAL OIL PRODUCTION
  - 5.13.3 WORLD REFINERY CAPACITY
- 5.14 TRENDS/DISRUPTIONS IMPACTING CUSTOMER BUSINESS
- 5.15 PATENT ANALYSIS
  - 5.15.1 INTRODUCTION
  - 5.15.2 DOCUMENT TYPES
  - 5.15.3 PUBLICATION TRENDS IN LAST 10 YEARS
  - **5.15.4 INSIGHTS**
  - 5.15.5 LEGAL STATUS OF PATENTS
  - 5.15.6 JURISDICTION ANALYSIS
  - 5.15.7 TOP APPLICANTS
- 5.16 PRICING ANALYSIS
- 5.16.1 AVERAGE SELLING PRICE TREND, BY REGION



- 5.16.2 AVERAGE SELLING PRICE, BY INGREDIENT
- 5.16.3 AVERAGE SELLING PRICE, BY TYPE
- 5.17 IMPACT OF AI/GEN AI

# **6 REFINERY CATALYSTS MARKET, BY TYPE**

- **6.1 INTRODUCTION**
- 6.2 FCC CATALYSTS
  - 6.2.1 PLAY KEY ROLE IN REFINING PROCESS
- 6.3 HYDROPROCESSING CATALYSTS
  - 6.3.1 HYDROTREATING CATALYSTS
    - 6.3.1.1 Essential in petroleum refining process
  - 6.3.2 HYDROCRACKING CATALYSTS
    - 6.3.2.1 Help convert heavy hydrocarbons into lighter, valuable products
- 6.4 CATALYTIC REFORMING CATALYSTS
- 6.4.1 DEMAND FOR HIGH OCTANE RATED PETROLEUM TO DRIVE MARKET
- 6.5 OTHER TYPES
  - 6.5.1 ISOMERIZATION CATALYSTS
  - 6.5.2 ALKYLATION CATALYSTS
  - 6.5.3 HYDROGENATION CATALYSTS
  - 6.5.4 DESULFURIZATION CATALYSTS

# 7 REFINERY CATALYSTS MARKET, BY INGREDIENT

- 7.1 INTRODUCTION
- 7.2 ZEOLITES
  - 7.2.1 MOST COMMON INGREDIENT IN REFINING CATALYSTS
    - 7.2.1.1 Natural zeolites
    - 7.2.1.2 Synthetic zeolites
- 7.3 METALS
  - 7.3.1 PLAY CRUCIAL ROLE IN PETROLEUM REFINING INDUSTRY
  - 7.3.2 PRECIOUS METALS
    - 7.3.2.1 Platinum
    - 7.3.2.2 Palladium
    - 7.3.2.3 Gold
  - 7.3.3 RARE EARTH METALS
  - 7.3.4 TRANSITION & BASE METALS
    - 7.3.4.1 Molybdenum
    - 7.3.4.2 Tungsten



- 7.3.4.3 Cobalt
- 7.3.4.4 Nickel
- 7.3.4.5 Iron
- 7.3.4.6 Zirconium
- 7.3.4.7 Manganese
- 7.3.4.8 Chromium
- 7.4 CHEMICAL COMPOUNDS
  - 7.4.1 WIDELY USED IN ALKYLATION PROCESS
  - 7.4.2 SULFURIC ACID & HYDROFLUORIC ACID
  - 7.4.3 CALCIUM CARBONATE

# **8 REFINERY CATALYSTS MARKET, BY REGION**

- 8.1 INTRODUCTION
- 8.2 NORTH AMERICA
  - 8.2.1 US
    - 8.2.1.1 Increasing oil production capacity to drive growth
  - **8.2.2 CANADA** 
    - 8.2.2.1 Government regulations to support market growth
  - **8.2.3 MEXICO** 
    - 8.2.3.1 Rise in automotive industry to drive market
- 8.3 ASIA PACIFIC
  - 8.3.1 CHINA
    - 8.3.1.1 Rising population and industrialization to drive market
  - 8.3.2 JAPAN
    - 8.3.2.1 Limited natural resources and adoption of renewable fuels to drive market
  - 8.3.3 INDIA
    - 8.3.3.1 Stringent environmental regulations to propel market
  - 8.3.4 SOUTH KOREA
    - 8.3.4.1 Increased investments by major oil refining companies to drive market
  - 8.3.5 REST OF ASIA PACIFIC
- 8.4 EUROPE
  - 8.4.1 RUSSIA
    - 8.4.1.1 High production capacity & new government policies to drive market
  - 8.4.2 GERMANY
  - 8.4.2.1 Implementation of new government regulations to drive market
  - **8.4.3 FRANCE**
- 8.4.3.1 Strict environmental regulations to meet net-zero carbon emissions to support market growth



- 8.4.4 UK
  - 8.4.4.1 Rising demand for electric vehicles to drive market
- 8.4.5 ITALY
  - 8.4.5.1 Heavy reliance on imported crude oil to support market growth
- 8.4.6 SPAIN
- 8.4.6.1 Growth of oil refining industries to boost market growth
- 8.4.7 REST OF EUROPE
- 8.5 MIDDLE EAST & AFRICA
  - 8.5.1 GCC COUNTRIES
  - 8.5.1.1 SAUDI ARABIA
    - 8.5.1.1.1 High petroleum exports to drive market
  - 8.5.1.2 REST OF GCC COUNTRIES
  - 8.5.2 SOUTH AFRICA
    - 8.5.2.1 Growth of petrochemical industry to drive market
  - 8.5.3 REST OF MIDDLE EAST & AFRICA
- 8.6 SOUTH AMERICA
  - 8.6.1 BRAZIL
- 8.6.1.1 Adoption of advanced catalysts to enhance refinery efficiency to propel market
  - 8.6.2 ARGENTINA
  - 8.6.2.1 Rising imports of refined products from US to support market growth
  - 8.6.3 REST OF SOUTH AMERICA

### 9 COMPETITIVE LANDSCAPE

- 9.1 OVERVIEW
- 9.2 KEY PLAYER STRATEGIES/RIGHT TO WIN, JANUARY 2019-JULY 2024
- 9.3 REVENUE ANALYSIS, 2021–2023
- 9.4 MARKET SHARE ANALYSIS, 2023
  - 9.4.1 BASF SE
  - 9.4.2 ALBEMARLE CORPORATION
  - 9.4.3 W. R. GRACE & CO.
  - **9.4.4 TOPSOE**
  - 9.4.5 HONEYWELL UOP
- 9.5 COMPANY VALUATION AND FINANCIAL METRICS, 2023
  - 9.5.1 COMPANY VALUATION
  - 9.5.2 FINANCIAL METRICS
- 9.6 BRAND/PRODUCT COMPARISON
- 9.7 COMPANY EVALUATION MATRIX: KEY PLAYERS, 2023



- 9.7.1 STARS
- 9.7.2 EMERGING LEADERS
- 9.7.3 PERVASIVE PLAYERS
- 9.7.4 PARTICIPANTS
- 9.7.5 COMPANY FOOTPRINT: KEY PLAYERS, 2023
  - 9.7.5.1 Company footprint
  - 9.7.5.2 Type footprint
  - 9.7.5.3 Ingredient footprint
  - 9.7.5.4 Region footprint
- 9.8 COMPANY EVALUATION MATRIX: STARTUPS/SMES, 2023
  - 9.8.1 PROGRESSIVE COMPANIES
  - 9.8.2 RESPONSIVE COMPANIES
  - 9.8.3 DYNAMIC COMPANIES
  - 9.8.4 STARTING BLOCKS
  - 9.8.5 COMPETITIVE BENCHMARKING, STARTUPS/SMES, 2023
    - 9.8.5.1 Detailed list of key startups/SMEs
    - 9.8.5.2 Competitive benchmarking of key startups/SMEs
- 9.9 COMPETITIVE SCENARIO
  - 9.9.1 PRODUCT LAUNCHES
  - 9.9.2 EXPANSIONS
  - 9.9.3 OTHER DEVELOPMENTS

### 10 COMPANY PROFILES

- 10.1 KEY PLAYERS
  - 10.1.1 ALBEMARLE CORPORATION
    - 10.1.1.1 Business overview
    - 10.1.1.2 Products/Solutions/Services offered
    - 10.1.1.3 Recent developments
      - 10.1.1.3.1 Expansions
    - 10.1.1.4 MnM view
      - 10.1.1.4.1 Key strengths
      - 10.1.1.4.2 Strategic choices
      - 10.1.1.4.3 Weaknesses and competitive threats
  - 10.1.2 W.R. GRACE & CO.
    - 10.1.2.1 Business overview
    - 10.1.2.2 Products/Solutions/Services offered
    - 10.1.2.3 Recent developments
    - 10.1.2.3.1 Product launches



- 10.1.2.4 MnM view
  - 10.1.2.4.1 Key strengths
  - 10.1.2.4.2 Strategic choices
  - 10.1.2.4.3 Weaknesses and competitive threats
- 10.1.3 BASF SE
  - 10.1.3.1 Business overview
  - 10.1.3.2 Products/Solutions/Services offered
  - 10.1.3.3 MnM view
    - 10.1.3.3.1 Key strengths
    - 10.1.3.3.2 Strategic choices
    - 10.1.3.3.3 Weaknesses and threats
- 10.1.4 TOPSOE
  - 10.1.4.1 Business overview
  - 10.1.4.2 Products/Solutions/Services offered
  - 10.1.4.3 Recent developments
    - 10.1.4.3.1 Expansions
  - 10.1.4.4 MnM view
    - 10.1.4.4.1 Key strengths
    - 10.1.4.4.2 Strategic choices
    - 10.1.4.4.3 Weaknesses and competitive threats
- 10.1.5 HONEYWELL UOP
  - 10.1.5.1 Business overview
  - 10.1.5.2 Products/Solutions/Services offered
  - 10.1.5.3 MnM view
    - 10.1.5.3.1 Key strengths
    - 10.1.5.3.2 Strategic choices
    - 10.1.5.3.3 Weaknesses and competitive threats
- 10.1.6 AXENS
  - 10.1.6.1 Business overview
  - 10.1.6.2 Products/Solutions/Services offered
  - 10.1.6.3 Recent developments
    - 10.1.6.3.1 Product launches
  - 10.1.6.4 MnM view
- 10.1.7 CLARIANT
  - 10.1.7.1 Business overview
  - 10.1.7.2 Products/Solutions/Services offered
- 10.1.7.3 Recent developments
  - 10.1.7.3.1 Other developments
- 10.1.7.4 MnM view



- 10.1.8 JOHNSON MATTHEY
  - 10.1.8.1 Business overview
  - 10.1.8.2 Products/Solutions/Services offered
  - 10.1.8.3 MnM view
- 10.1.9 SHELL CATALYSTS & TECHNOLOGIES
  - 10.1.9.1 Business overview
  - 10.1.9.2 Products/Solutions/Services offered
  - 10.1.9.3 MnM view
- 10.1.10 CHINA PETROLEUM & CHEMICAL CORPORATION (SINOPEC)
  - 10.1.10.1 Business overview
  - 10.1.10.2 Products/Solutions/Services offered
  - 10.1.10.3 MnM view
- 10.1.11 ARKEMA
  - 10.1.11.1 Business overview
  - 10.1.11.2 Products/Solutions/Services offered
  - 10.1.11.3 MnM view
- 10.2 OTHER PLAYERS
  - 10.2.1 JGC CATALYSTS AND CHEMICALS LTD.
  - 10.2.2 CHEVRON CORPORATION
  - 10.2.3 ANTENCHEM
  - 10.2.4 DORF KETAL CHEMICALS (I) PVT. LTD.
  - 10.2.5 EXXON MOBIL CORPORATION
  - 10.2.6 REZEL CATALYSTS CORPORATION
  - 10.2.7 KUWAIT CATALYST COMPANY
  - **10.2.8 KNT GROUP**
  - 10.2.9 UNICAT CATALYST TECHNOLOGIES, LLC
  - 10.2.10 N. E. CHEMCAT CORPORATION
  - 10.2.11 GAZPROM
  - 10.2.12 ZEOLYST INTERNATIONAL
  - 10.2.13 NIPPON KETJEN CO., LTD.
  - 10.2.14 QINGDAO HUICHENG ENVIRONMENTAL TECHNOLOGY CO., LTD
  - 10.2.15 CHEMPACK

### 11 APPENDIX

- 11.1 DISCUSSION GUIDE
- 11.2 KNOWLEDGESTORE: MARKETSANDMARKETS' SUBSCRIPTION PORTAL
- 11.3 RELATED REPORTS
- 11.4 AUTHOR DETAILS



TABLE 1 ENVIRONMENTAL REGULATIONS FOR STANDARDS ON FUEL QUALITY AND EMISSIONS

TABLE 2 WORLD PROVEN CRUDE OIL RESERVES, BY COUNTRY (MILLION BARREL)

TABLE 3 PERCENTAGE OF ELECTRIC VEHICLE SALES, BY COUNTRY, 2019–2023

TABLE 4 REFINERY CATALYSTS MARKET: PORTER'S FIVE FORCES ANALYSIS

TABLE 5 INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS

TABLE 6 KEY BUYING CRITERIA FOR TOP 3 TYPES OF REFINERY CATALYSTS

TABLE 7 REFINERY CATALYSTS MARKET: ROLE IN ECOSYSTEM

TABLE 8 REFINERY CATALYSTS MARKET: KEY CONFERENCES AND EVENTS, 2024–2025

TABLE 9 LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

TABLE 10 PROJECTED REAL GDP GROWTH (ANNUAL PERCENT CHANGE) OF KEY COUNTRIES, 2019–2023

TABLE 11 PROJECTED REAL GDP GROWTH (ANNUAL PERCENT CHANGE) OF KEY COUNTRIES, 2024–2029

TABLE 12 CRUDE OIL PRODUCTION, BY COUNTRY, 2019–2023 (1,000 B/D)

TABLE 13 WORLD REFINERY CAPACITY, BY COUNTRY, 2019–2023 (1,000 B/D)

TABLE 14 LIST OF PATENTS BY SAUDI ARABIAN OIL COMPANY

TABLE 15 LIST OF PATENTS BY UNITED LABORATORIES INTERNATIONAL

TABLE 16 LIST OF PATENTS BY CHINA PETROLEUM & CHEM CORP.

TABLE 17 LIST OF PATENTS BY SABIC GLOBAL TECHNOLOGIES

TABLE 18 LIST OF PATENTS BY CHEVRON PHILIPS CHEMICAL COMPANY LP

TABLE 19 TOP 10 PATENT OWNERS IN LAST 10 YEARS

TABLE 20 REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 21 REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (USD MILLION)

TABLE 22 REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 23 REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 24 REFINERY CATALYSTS MARKET, BY INGREDIENT, 2020–2023 (USD MILLION)

TABLE 25 REFINERY CATALYSTS MARKET, BY INGREDIENT, 2024–2029 (USD MILLION)

TABLE 26 REFINERY CATALYSTS MARKET, BY INGREDIENT, 2020–2023 (KILOTON)

TABLE 27 REFINERY CATALYSTS MARKET, BY INGREDIENT, 2024–2029 (KILOTON)

TABLE 28 REFINERY CATALYSTS MARKET, BY REGION, 2020–2023 (USD MILLION)



TABLE 29 REFINERY CATALYSTS MARKET, BY REGION, 2024–2029 (USD MILLION)

TABLE 30 REFINERY CATALYSTS MARKET, BY REGION, 2020–2023 (KILOTON) TABLE 31 REFINERY CATALYSTS MARKET, BY REGION, 2024–2029 (KILOTON) TABLE 32 NORTH AMERICA: REFINERY CATALYSTS MARKET, BY COUNTRY,

# 2020-2023 (USD MILLION)

TABLE 33 NORTH AMERICA: REFINERY CATALYSTS MARKET, BY COUNTRY,

# 2024-2029 (USD MILLION)

TABLE 34 NORTH AMERICA: REFINERY CATALYSTS MARKET, BY COUNTRY,

# 2020-2023 (KILOTON)

TABLE 35 NORTH AMERICA: REFINERY CATALYSTS MARKET, BY COUNTRY,

# 2024-2029 (KILOTON)

TABLE 36 NORTH AMERICA: REFINERY CATALYSTS MARKET, BY INGREDIENT,

### 2020-2023 (USD MILLION)

TABLE 37 NORTH AMERICA: REFINERY CATALYSTS MARKET, BY INGREDIENT,

### 2024-2029 (USD MILLION)

TABLE 38 NORTH AMERICA: REFINERY CATALYSTS MARKET, BY INGREDIENT,

# 2020-2023 (KILOTON)

TABLE 39 NORTH AMERICA: REFINERY CATALYSTS MARKET, BY INGREDIENT,

# 2024-2029 (KILOTON)

TABLE 40 NORTH AMERICA: REFINERY CATALYSTS MARKET, BY TYPE,

### 2020–2023 (USD MILLION)



TABLE 41 NORTH AMERICA: REFINERY CATALYSTS MARKET, BY TYPE,

# 2024-2029 (USD MILLION)

TABLE 42 NORTH AMERICA: REFINERY CATALYSTS MARKET, BY TYPE,

# 2020–2023 (KILOTON)

TABLE 43 NORTH AMERICA: REFINERY CATALYSTS MARKET, BY TYPE,

# 2024-2029 (KILOTON)

TABLE 44 US: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 45 US: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (USD MILLION)

TABLE 46 US: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 47 US: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 48 CANADA: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 49 CANADA: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (USD MILLION)

TABLE 50 CANADA: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 51 CANADA: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 52 MEXICO: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 53 MEXICO: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (USD MILLION)

TABLE 54 MEXICO: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 55 MEXICO: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 56 ASIA PACIFIC: REFINERY CATALYSTS MARKET, BY COUNTRY,

### 2020-2023 (USD MILLION)



TABLE 57 ASIA PACIFIC: REFINERY CATALYSTS MARKET, BY COUNTRY,

2024-2029 (USD MILLION)

TABLE 58 ASIA PACIFIC: REFINERY CATALYSTS MARKET, BY COUNTRY,

2020-2023 (KILOTON)

TABLE 59 ASIA PACIFIC: REFINERY CATALYSTS MARKET, BY COUNTRY,

2024-2029 (KILOTON)

TABLE 60 ASIA PACIFIC: REFINERY CATALYSTS MARKET, BY INGREDIENT,

2020-2023 (USD MILLION)

TABLE 61 ASIA PACIFIC: REFINERY CATALYSTS MARKET, BY INGREDIENT,

2024-2029 (USD MILLION)

TABLE 62 ASIA PACIFIC: REFINERY CATALYSTS MARKET, BY INGREDIENT,

2020-2023 (KILOTON)

TABLE 63 ASIA PACIFIC: REFINERY CATALYSTS MARKET, BY INGREDIENT,

2024-2029 (KILOTON)

TABLE 64 ASIA PACIFIC: REFINERY CATALYSTS MARKET, BY TYPE,

2020-2023 (USD MILLION)

TABLE 65 ASIA PACIFIC: REFINERY CATALYSTS MARKET, BY TYPE,

2024-2029 (USD MILLION)

TABLE 66 ASIA PACIFIC: REFINERY CATALYSTS MARKET, BY TYPE,

2020-2023 (KILOTON)

Refinery Catalysts Market by Type (FCC Catalysts, Hydrotreating Catalysts, Hydrocracking Catalysts, Catalysts...



TABLE 67 ASIA PACIFIC: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 68 CHINA: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 69 CHINA: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (USD MILLION)

TABLE 70 CHINA: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 71 CHINA: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 72 JAPAN: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 73 JAPAN: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (USD MILLION)

TABLE 74 JAPAN: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 75 JAPAN: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 76 INDIA: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 77 INDIA: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (USD MILLION)

TABLE 78 INDIA: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 79 INDIA: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 80 SOUTH KOREA: REFINERY CATALYSTS MARKET, BY TYPE,

# 2020-2023 (USD MILLION)

TABLE 81 SOUTH KOREA: REFINERY CATALYSTS MARKET, BY TYPE,

# 2024-2029 (USD MILLION)

TABLE 82 SOUTH KOREA: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 83 SOUTH KOREA: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)



TABLE 84 REST OF ASIA PACIFIC: REFINERY CATALYSTS MARKET, BY TYPE,

2020-2023 (USD MILLION)

TABLE 85 REST OF ASIA PACIFIC: REFINERY CATALYSTS MARKET, BY TYPE,

2024-2029 (USD MILLION)

TABLE 86 REST OF ASIA PACIFIC: REFINERY CATALYSTS MARKET, BY TYPE,

2020-2023 (KILOTON)

TABLE 87 REST OF ASIA PACIFIC: REFINERY CATALYSTS MARKET, BY TYPE,

2024-2029 (KILOTON)

TABLE 88 EUROPE: REFINERY CATALYSTS MARKET, BY COUNTRY,

2020-2023 (USD MILLION)

TABLE 89 EUROPE: REFINERY CATALYSTS MARKET, BY COUNTRY,

2024-2029 (USD MILLION)

TABLE 90 EUROPE: REFINERY CATALYSTS MARKET, BY COUNTRY, 2020–2023

(KILOTON)

TABLE 91 EUROPE: REFINERY CATALYSTS MARKET, BY COUNTRY, 2024–2029

(KILOTON)

TABLE 92 EUROPE: REFINERY CATALYSTS MARKET, BY INGREDIENT,

2020-2023 (USD MILLION)

TABLE 93 EUROPE: REFINERY CATALYSTS MARKET, BY INGREDIENT,

2024-2029 (USD MILLION)

TABLE 94 EUROPE: REFINERY CATALYSTS MARKET, BY INGREDIENT,

2020-2023 (KILOTON)

TABLE 95 EUROPE: REFINERY CATALYSTS MARKET, BY INGREDIENT,

Refinery Catalysts Market by Type (FCC Catalysts, Hydrotreating Catalysts, Hydrocracking Catalysts, Catalysts...



2024-2029 (KILOTON)

TABLE 96 EUROPE: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 97 EUROPE: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (USD MILLION)

TABLE 98 EUROPE: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 99 EUROPE: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 100 RUSSIA: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 101 RUSSIA: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (USD MILLION)

TABLE 102 RUSSIA: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 103 RUSSIA: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 104 GERMANY: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 105 GERMANY: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (USD MILLION)

TABLE 106 GERMANY: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 107 GERMANY: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 108 FRANCE: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 109 FRANCE: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (USD MILLION)

TABLE 110 FRANCE: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 111 FRANCE: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 112 UK: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 113 UK: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (USD MILLION)

TABLE 114 UK: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON) TABLE 115 UK: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)



TABLE 116 ITALY: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 117 ITALY: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (USD MILLION)

TABLE 118 ITALY: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 119 ITALY: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 120 SPAIN: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 121 SPAIN: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (USD MILLION)

TABLE 122 SPAIN: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 123 SPAIN: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 124 REST OF EUROPE: REFINERY CATALYSTS MARKET, BY TYPE,

### 2020-2023 (USD MILLION)

TABLE 125 REST OF EUROPE: REFINERY CATALYSTS MARKET, BY TYPE.

### 2024-2029 (USD MILLION)

TABLE 126 REST OF EUROPE: REFINERY CATALYSTS MARKET, BY TYPE,

# 2020-2023 (KILOTON)

TABLE 127 REST OF EUROPE: REFINERY CATALYSTS MARKET, BY TYPE,

### 2024-2029 (KILOTON)

TABLE 128 MIDDLE EAST & AFRICA: REFINERY CATALYSTS MARKET, BY COUNTRY,

# 2020–2023 (USD MILLION)

TABLE 129 MIDDLE EAST & AFRICA: REFINERY CATALYSTS MARKET, BY COUNTRY,



### 2024–2029 (USD MILLION)

TABLE 130 MIDDLE EAST & AFRICA: REFINERY CATALYSTS MARKET, BY COUNTRY,

# 2020-2023 (KILOTON)

TABLE 131 MIDDLE EAST & AFRICA: REFINERY CATALYSTS MARKET, BY COUNTRY,

# 2024-2029 (KILOTON)

TABLE 132 MIDDLE EAST & AFRICA: REFINERY CATALYSTS MARKET, BY INGREDIENT,

# 2020-2023 (USD MILLION)

TABLE 133 MIDDLE EAST & AFRICA: REFINERY CATALYSTS MARKET, BY INGREDIENT,

# 2024-2029 (USD MILLION)

TABLE 134 MIDDLE EAST & AFRICA: REFINERY CATALYSTS MARKET, BY INGREDIENT,

# 2020-2023 (KILOTON)

TABLE 135 MIDDLE EAST & AFRICA: REFINERY CATALYSTS MARKET, BY INGREDIENT,

# 2024-2029 (KILOTON)

TABLE 136 MIDDLE EAST & AFRICA: REFINERY CATALYSTS MARKET, BY TYPE,

# 2020-2023 (USD MILLION)

TABLE 137 MIDDLE EAST & AFRICA: REFINERY CATALYSTS MARKET, BY TYPE,



## 2024-2029 (USD MILLION)

TABLE 138 MIDDLE EAST & AFRICA: REFINERY CATALYSTS MARKET, BY TYPE,

# 2020-2023 (KILOTON)

TABLE 139 MIDDLE EAST & AFRICA: REFINERY CATALYSTS MARKET, BY TYPE,

# 2024-2029 (KILOTON)

TABLE 140 SAUDI ARABIA: REFINERY CATALYSTS MARKET, BY TYPE,

# 2020-2023 (USD MILLION)

TABLE 141 SAUDI ARABIA: REFINERY CATALYSTS MARKET, BY TYPE,

# 2024-2029 (USD MILLION)

TABLE 142 SAUDI ARABIA: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 143 SAUDI ARABIA: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 144 REST OF GCC COUNTRIES: REFINERY CATALYSTS MARKET, BY TYPE,

# 2020-2023 (USD MILLION)

TABLE 145 REST OF GCC COUNTRIES: REFINERY CATALYSTS MARKET, BY TYPE.

### 2024-2029 (USD MILLION)

TABLE 146 REST OF GCC COUNTRIES: REFINERY CATALYSTS MARKET, BY TYPE,

# 2020-2023 (KILOTON)

TABLE 147 REST OF GCC COUNTRIES: REFINERY CATALYSTS MARKET, BY TYPE,



# 2024-2029 (KILOTON)

TABLE 148 SOUTH AFRICA: REFINERY CATALYSTS MARKET, BY TYPE,

### 2020-2023 (USD MILLION)

TABLE 149 SOUTH AFRICA: REFINERY CATALYSTS MARKET, BY TYPE,

# 2024-2029 (USD MILLION)

TABLE 150 SOUTH AFRICA: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 151 SOUTH AFRICA: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 152 REST OF MIDDLE EAST & AFRICA: REFINERY CATALYSTS MARKET, BY TYPE,

# 2020-2023 (USD MILLION)

TABLE 153 REST OF MIDDLE EAST & AFRICA: REFINERY CATALYSTS MARKET, BY TYPE,

# 2024-2029 (USD MILLION)

TABLE 154 REST OF MIDDLE EAST & AFRICA: REFINERY CATALYSTS MARKET, BY TYPE,

### 2020-2023 (KILOTON)

TABLE 155 REST OF MIDDLE EAST & AFRICA: REFINERY CATALYSTS MARKET, BY TYPE,

## 2024-2029 (KILOTON)

TABLE 156 SOUTH AMERICA: REFINERY CATALYSTS MARKET, BY COUNTRY,

# 2020-2023 (USD MILLION)



TABLE 157 SOUTH AMERICA: REFINERY CATALYSTS MARKET, BY COUNTRY,

2024-2029 (USD MILLION)

TABLE 158 SOUTH AMERICA: REFINERY CATALYSTS MARKET, BY COUNTRY,

2020-2023 (KILOTON)

TABLE 159 SOUTH AMERICA: REFINERY CATALYSTS MARKET, BY COUNTRY,

2024-2029 (KILOTON)

TABLE 160 SOUTH AMERICA: REFINERY CATALYSTS MARKET, BY INGREDIENT,

2020-2023 (USD MILLION)

TABLE 161 SOUTH AMERICA: REFINERY CATALYSTS MARKET, BY INGREDIENT,

2024-2029 (USD MILLION)

TABLE 162 SOUTH AMERICA: REFINERY CATALYSTS MARKET, BY INGREDIENT,

2020-2023 (KILOTON)

TABLE 163 SOUTH AMERICA: REFINERY CATALYSTS MARKET, BY INGREDIENT,

2024-2029 (KILOTON)

TABLE 164 SOUTH AMERICA: REFINERY CATALYSTS MARKET, BY TYPE,

2020-2023 (USD MILLION)

TABLE 165 SOUTH AMERICA: REFINERY CATALYSTS MARKET, BY TYPE,

2024-2029 (USD MILLION)

TABLE 166 SOUTH AMERICA: REFINERY CATALYSTS MARKET, BY TYPE,

2020-2023 (KILOTON)

TABLE 167 SOUTH AMERICA: REFINERY CATALYSTS MARKET, BY TYPE,

Refinery Catalysts Market by Type (FCC Catalysts, Hydrotreating Catalysts, Hydrocracking Catalysts, Catalysts...



2024-2029 (KILOTON)

TABLE 168 BRAZIL: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 169 BRAZIL: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (USD MILLION)

TABLE 170 BRAZIL: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 171 BRAZIL: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 172 ARGENTINA: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (USD MILLION)

TABLE 173 ARGENTINA: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (USD MILLION)

TABLE 174 ARGENTINA: REFINERY CATALYSTS MARKET, BY TYPE, 2020–2023 (KILOTON)

TABLE 175 ARGENTINA: REFINERY CATALYSTS MARKET, BY TYPE, 2024–2029 (KILOTON)

TABLE 176 REST OF SOUTH AMERICA: REFINERY CATALYSTS MARKET, BY TYPE,

### 2020-2023 (USD MILLION)

TABLE 177 REST OF SOUTH AMERICA: REFINERY CATALYSTS MARKET, BY TYPE,

## 2024-2029 (USD MILLION)

TABLE 178 REST OF SOUTH AMERICA: REFINERY CATALYSTS MARKET, BY TYPE.

### 2020-2023 (KILOTON)

TABLE 179 REST OF SOUTH AMERICA: REFINERY CATALYSTS MARKET, BY TYPE,

# 2024-2029 (KILOTON)

TABLE 180 MARKET SHARE ANALYSIS OF KEY COMPANIES, 2023
TABLE 181 REFINERY CATALYSTS MARKET: COMPANY FOOTPRINT



TABLE 182 REFINERY CATALYSTS MARKET: TYPE FOOTPRINT

TABLE 183 REFINERY CATALYSTS MARKET: INGREDIENT FOOTPRINT

TABLE 184 REFINERY CATALYSTS MARKET: REGION FOOTPRINT

TABLE 185 REFINERY CATALYSTS MARKET: LIST OF KEY STARTUPS/SMES

TABLE 186 REFINERY CATALYSTS MARKET: COMPETITIVE BENCHMARKING OF STARTUPS/SMES

TABLE 187 REFINERY CATALYSTS MARKET: PRODUCT LAUNCHES, JANUARY 2019–JULY 2024

TABLE 188 REFINERY CATALYSTS MARKET: EXPANSIONS, JANUARY 2019–JULY 2024

TABLE 189 REFINERY CATALYSTS MARKET: OTHER DEVELOPMENTS, JANUARY 2019–JULY 2024

TABLE 190 ALBEMARLE CORPORATION: COMPANY OVERVIEW

TABLE 191 ALBEMARLE CORPORATION: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 192 ALBEMARLE CORPORATION: EXPANSIONS, JANUARY 2019–JULY 2024

TABLE 193 W.R. GRACE & CO.: COMPANY OVERVIEW

TABLE 194 W. R. GRACE & CO.: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 195 W.R. GRACE & CO.: PRODUCT LAUNCHES, JANUARY 2019-JUNE 2024

TABLE 196 BASF SE: COMPANY OVERVIEW

TABLE 197 BASF SE: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 198 TOPSOE: COMPANY OVERVIEW

TABLE 199 TOPSOE: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 200 TOPSOE: EXPANSIONS, JANUARY 2019-JULY 2024

TABLE 201 HONEYWELL UOP: COMPANY OVERVIEW

TABLE 202 HONEYWELL UOP: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 203 AXENS: COMPANY OVERVIEW

TABLE 204 AXENS: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 205 AXENS: PRODUCT LAUNCHES, JANUARY 2019-JULY 2024

TABLE 206 CLARIANT: COMPANY OVERVIEW

TABLE 207 CLARIANT: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 208 CLARIANT: OTHER DEVELOPMENTS, JANUARY 2019-JULY 2024

TABLE 209 JOHNSON MATTHEY: COMPANY OVERVIEW

TABLE 210 JOHNSON MATTHEY: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 211 SHELL CATALYSTS & TECHNOLOGIES: COMPANY OVERVIEW

TABLE 212 SHELL CATALYSTS & TECHNOLOGIES:

PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 213 CHINA PETROLEUM & CHEMICAL CORPORATION (SINOPEC):



**COMPANY OVERVIEW** 

TABLE 214 CHINA PETROLEUM & CHEMICAL CORPORATION (SINOPEC):

PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 215 ARKEMA: COMPANY OVERVIEW

TABLE 216 ARKEMA: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 217 JGC CATALYSTS AND CHEMICALS LTD.: COMPANY OVERVIEW

TABLE 218 CHEVRON CORPORATION: COMPANY OVERVIEW

TABLE 219 ANTENCHEM: COMPANY OVERVIEW

TABLE 220 DORF KETAL CHEMICALS (I) PVT. LTD.: COMPANY OVERVIEW

TABLE 221 EXXON MOBIL CORPORATION: COMPANY OVERVIEW

TABLE 222 REZEL CATALYSTS CORPORATION: COMPANY OVERVIEW

TABLE 223 KUWAIT CATALYST COMPANY: COMPANY OVERVIEW

TABLE 224 KNT GROUP: COMPANY OVERVIEW

TABLE 225 UNICAT CATALYST TECHNOLOGIES, LLC: COMPANY OVERVIEW

TABLE 226 N. E. CHEMCAT CORPORATION: COMPANY OVERVIEW

TABLE 227 GAZPROM: COMPANY OVERVIEW

TABLE 228 ZEOLYST INTERNATIONAL: COMPANY OVERVIEW

TABLE 229 NIPPON KETJEN CO., LTD.: COMPANY OVERVIEW

TABLE 230 QINGDAO HUICHENG ENVIRONMENTAL TECHNOLOGY CO., LTD:

**COMPANY OVERVIEW** 

TABLE 231 CHEMPACK: COMPANY OVERVIEW

FIGURE 1 REFINERY CATALYSTS MARKET: RESEARCH DESIGN

FIGURE 2 REFINERY CATALYSTS MARKET: TOP-DOWN APPROACH

FIGURE 3 MARKET SIZE ESTIMATION: REFINERY CATALYSTS MARKET -

FCC CATALYSTS APPROACH

FIGURE 4 DEMAND-SIDE FORECAST PROJECTIONS

FIGURE 5 REFINERY CATALYSTS MARKET: DATA TRIANGULATION

FIGURE 6 METALS TO DOMINATE MARKET DURING FORECAST PERIOD

FIGURE 7 FCC CATALYSTS ACCOUNTED FOR LARGEST MARKET SHARE IN 2023

FIGURE 8 ASIA PACIFIC TO REGISTER HIGHEST GROWTH DURING FORECAST PERIOD

FIGURE 9 GROWING DEMAND FROM AUTOMOTIVE SECTOR IN EMERGING ECONOMIES

TO DRIVE MARKET

FIGURE 10 ZEOLITES TO DOMINATE MARKET DURING FORECAST PERIOD FIGURE 11 HYDROCRACKING CATALYSTS TO REGISTER HIGHEST GROWTH DURING

FORECAST PERIOD

FIGURE 12 INDIA TO REGISTER HIGHEST CAGR IN REFINERY CATALYSTS



**MARKET** 

FROM 2024 TO 2029

FIGURE 13 REFINERY CATALYSTS MARKET: DRIVERS, RESTRAINTS, OPPORTUNITIES,

AND CHALLENGES

FIGURE 14 REFINERY CATALYSTS MARKET: PORTER'S FIVE FORCES ANALYSIS

FIGURE 15 INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS FOR TOP 3 TYPES OF REFINERY CATALYSTS

FIGURE 16 SUPPLIER SELECTION CRITERIA

FIGURE 17 REFINERY CATALYSTS MARKET: VALUE CHAIN ANALYSIS

FIGURE 18 REFINERY CATALYSTS MARKET: ECOSYSTEM

FIGURE 19 IMPORT DATA FOR HS CODE 381511, BY COUNTRY,

# 2019-2023 (USD THOUSAND)

FIGURE 20 EXPORT DATA FOR HS CODE 381511, BY COUNTRY,

### 2019-2023 (USD THOUSAND)

FIGURE 21 IMPORT DATA FOR HS CODE 381512, BY COUNTRY.

### 2019-2023 (USD THOUSAND)

FIGURE 22 EXPORT DATA FOR HS CODE 381512, BY COUNTRY,

### 2019-2023 (USD THOUSAND)

FIGURE 23 IMPORT DATA FOR HS CODE 381519, BY COUNTRY,

### 2019-2023 (USD THOUSAND)

FIGURE 24 EXPORT DATA FOR HS CODE 381519, BY COUNTRY,

### 2019-2023 (USD THOUSAND)

FIGURE 25 INVESTMENT AND FUNDING SCENARIO, 2021–2023 (USD MILLION) FIGURE 26 TRENDS/DISRUPTIONS IMPACTING CUSTOMER BUSINESS FIGURE 27 PATENTS REGISTERED (2013–2023)



FIGURE 28 NO. OF PATENTS IN LAST 10 YEARS

FIGURE 29 LEGAL STATUS OF PATENTS, 2023

FIGURE 30 TOP JURISDICTIONS

FIGURE 31 ANALYSIS OF TOP APPLICANTS

FIGURE 32 AVERAGE SELLING PRICE, BY REGION (USD/KG)

FIGURE 33 AVERAGE SELLING PRICE, BY INGREDIENT (USD/KG)

FIGURE 34 AVERAGE SELLING PRICE, BY TYPE (USD/KG)

FIGURE 35 HYDROCRACKING CATALYSTS SEGMENT TO REGISTER HIGHEST GROWTH

**DURING FORECAST PERIOD** 

FIGURE 36 METALS TO DOMINATE MARKET DURING FORECAST PERIOD

FIGURE 37 ASIA PACIFIC COUNTRIES TO REGISTER HIGHER GROWTH DURING FORECAST PERIOD

FIGURE 38 NORTH AMERICA: REFINERY CATALYSTS MARKET SNAPSHOT

FIGURE 39 ASIA PACIFIC: REFINERY CATALYSTS MARKET SNAPSHOT

FIGURE 40 EUROPE: REFINERY CATALYSTS MARKET SNAPSHOT

FIGURE 41 OVERVIEW OF STRATEGIES ADOPTED BY KEY PLAYERS IN

REFINERY CATALYSTS MARKET BETWEEN JANUARY 2019 AND JULY 2024

FIGURE 42 REFINERY CATALYSTS MARKET: REVENUE ANALYSIS OF KEY

PLAYERS, 2021–2023 (USD MILLION)

FIGURE 43 REFINERY CATALYSTS MARKET SHARE ANALYSIS, 2023

FIGURE 44 COMPANY VALUATION OF LEADING COMPANIES IN REFINERY

CATALYSTS MARKET, 2023 (USD BILLION)

FIGURE 45 FINANCIAL METRICS OF LEADING COMPANIES IN REFINERY CATALYSTS MARKET, 2023

FIGURE 46 REFINERY CATALYSTS MARKET: BRAND/PRODUCT COMPARISON

FIGURE 47 REFINERY CATALYSTS MARKET: COMPANY EVALUATION MATRIX (KEY PLAYERS), 2023

FIGURE 48 REFINERY CATALYSTS MARKET: COMPANY EVALUATION MATRIX (STARTUPS/SMES), 2023

FIGURE 49 ALBEMARLE CORPORATION: COMPANY SNAPSHOT

FIGURE 50 BASF SE: COMPANY SNAPSHOT

FIGURE 51 TOPSOE: COMPANY SNAPSHOT

FIGURE 52 HONEYWELL UOP: COMPANY SNAPSHOT

FIGURE 53 CLARIANT: COMPANY SNAPSHOT

FIGURE 54 JOHNSON MATTHEY: COMPANY SNAPSHOT

FIGURE 55 SHELL CATALYSTS & TECHNOLOGIES: COMPANY SNAPSHOT

FIGURE 56 CHINA PETROLEUM & CHEMICAL CORPORATION (SINOPEC):

COMPANY SNAPSHOT



# FIGURE 57 ARKEMA: COMPANY SNAPSHOT



# **About**

Refining catalysts are used to refine crude oil. Shale oils nowadays are becoming a major feed source for large number of refineries. While these feedstock are generally sweet and light, issues the refiners are facing when processing tight oil include: contaminant metals, configurational imbalances and heat balance effects, in the refinery. The refiners can now apply new catalyst technologies to maximize the value present in tight oil feedstock. Refinery catalysts play a vital role in helping refiners meet fuel standards, better managing operational efficiency, enhancing conversion and selectivity, and in keeping pace with the changing clean fuel trends. New levels of flexibility are required in refinery processes as products demand change and the availability of specific crudes is altered. As petroleum is predicted to remain the most important single resource for transportation by 2050, the development of new refinery technologies and catalysts is expected to be of utmost importance in the coming future.

The refinery catalysts comprises following subgroups:

**FCC** 

Hydrotreating

Hydrocracking

Alkylation

Others

The FCC catalysts play a very important role in conversion of heavy atmospheric residues and vacuum distillates into fractions of motor fuels, mainly gasoline. Hydrotreating catalysts are used in petroleum refining in order to remove contaminants such as oxygen, nitrogen, sulfur, and metals from liquid petroleum fractions. The objective of hydrocracking catalysts is to convert heavy oil feedstock into high-quality, lighter fuel products such as naphtha, gasoline, jet or kerosene, and diesel, and hydrowax which can be used as petrochemical plant lube basestock or feedstock.

The global market for refinery catalysts has witnessed a decent growth in the last five years. This growth can be attributed to surging demand for energy and growing refinery



capacities. The global refinery catalysts market which majorly includes fluid catalytic cracking catalysts and hydroprocessing catalysts has witnessed high growth in last five years. This market is projected to reach XX KT by 2019, at a CAGR of XX% between 2014 and 2019. North America accounts for the major share in overall refinery catalysts due to huge refinery capacities and increasing energy demand in the region.

Some of the drivers identified for the industry are stringent environmental regulations, rising consumption of petroleum-based derivatives, and demand for maintaining high octane number. The restraining factors are identified as diminishing crude oil reserves, and high cost of production. Backward integration by refinery catalysts manufacturers can serve as an opportunity during the forecast period.



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