

# Global Fourth Generation Fluorine-based Refrigerants Market 2023 by Manufacturers, Regions, Type and Application, Forecast to 2029

<https://marketpublishers.com/r/GA5FB4249E14EN.html>

Date: July 2024

Pages: 93

Price: US\$ 3,480.00 (Single User License)

ID: GA5FB4249E14EN

## Abstracts

According to our (Global Info Research) latest study, the global Fourth Generation Fluorine-based Refrigerants market size was valued at USD 889 million in 2022 and is forecast to a readjusted size of USD 1119.6 million by 2029 with a CAGR of 3.3% during review period. The influence of COVID-19 and the Russia-Ukraine War were considered while estimating market sizes.

Fourth-generation fluorine-based refrigerants refer to a group of refrigerants that were developed as alternatives to HFCs (hydrofluorocarbons) with high global warming potential (GWP). These refrigerants have lower GWPs and are considered more environmentally friendly.

This report is a detailed and comprehensive analysis for global Fourth Generation Fluorine-based Refrigerants market. Both quantitative and qualitative analyses are presented by manufacturers, by region & country, by Type and by Application. As the market is constantly changing, this report explores the competition, supply and demand trends, as well as key factors that contribute to its changing demands across many markets. Company profiles and product examples of selected competitors, along with market share estimates of some of the selected leaders for the year 2023, are provided.

Key Features:

Global Fourth Generation Fluorine-based Refrigerants market size and forecasts, in consumption value (\$ Million), sales quantity (Tons), and average selling prices (US\$/Ton), 2018-2029

Global Fourth Generation Fluorine-based Refrigerants market size and forecasts by region and country, in consumption value (\$ Million), sales quantity (Tons), and average selling prices (US\$/Ton), 2018-2029

Global Fourth Generation Fluorine-based Refrigerants market size and forecasts, by Type and by Application, in consumption value (\$ Million), sales quantity (Tons), and

average selling prices (US\$/Ton), 2018-2029

Global Fourth Generation Fluorine-based Refrigerants market shares of main players, shipments in revenue (\$ Million), sales quantity (Tons), and ASP (US\$/Ton), 2018-2023.

The Primary Objectives in This Report Are:

To determine the size of the total market opportunity of global and key countries

To assess the growth potential for Fourth Generation Fluorine-based Refrigerants

To forecast future growth in each product and end-use market

To assess competitive factors affecting the marketplace.

This report profiles key players in the global Fourth Generation Fluorine-based Refrigerants market based on the following parameters - company overview, production, value, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Chemours, Honeywell, Arkema, Gas Servei and Zhejiang Juhua. etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals, COVID-19 and Russia-Ukraine War Influence.

Market Segmentation

Fourth Generation Fluorine-based Refrigerants market is split by Type and by Application. For the period 2018-2029, the growth among segments provides accurate calculations and forecasts for consumption value by Type, and by Application in terms of volume and value. This analysis can help you expand your business by targeting qualified niche markets.

Market segment by Type

R1234ze

R1234yf

Other

Market segment by Application

Commercial Refrigeration

Industrial Refrigeration

Other

## Major players covered

Chemours

Honeywell

Arkema

Gas Servei

Zhejiang Juhua

## Market segment by region, regional analysis covers

North America (United States, Canada and Mexico)

Europe (Germany, France, United Kingdom, Russia, Italy, and Rest of Europe)

Asia-Pacific (China, Japan, Korea, India, Southeast Asia, and Australia)

South America (Brazil, Argentina, Colombia, and Rest of South America)

Middle East & Africa (Saudi Arabia, UAE, Egypt, South Africa, and Rest of Middle East & Africa)

The content of the study subjects, includes a total of 15 chapters:

Chapter 1, to describe Fourth Generation Fluorine-based Refrigerants product scope, market overview, market estimation caveats and base year.

Chapter 2, to profile the top manufacturers of Fourth Generation Fluorine-based Refrigerants, with price, sales, revenue and global market share of Fourth Generation Fluorine-based Refrigerants from 2018 to 2023.

Chapter 3, the Fourth Generation Fluorine-based Refrigerants competitive situation, sales quantity, revenue and global market share of top manufacturers are analyzed emphatically by landscape contrast.

Chapter 4, the Fourth Generation Fluorine-based Refrigerants breakdown data are shown at the regional level, to show the sales quantity, consumption value and growth by regions, from 2018 to 2029.

Chapter 5 and 6, to segment the sales by Type and application, with sales market share and growth rate by type, application, from 2018 to 2029.

Chapter 7, 8, 9, 10 and 11, to break the sales data at the country level, with sales quantity, consumption value and market share for key countries in the world, from 2017 to 2022. and Fourth Generation Fluorine-based Refrigerants market forecast, by regions, type and application, with sales and revenue, from 2024 to 2029.

Chapter 12, market dynamics, drivers, restraints, trends, Porters Five Forces analysis, and Influence of COVID-19 and Russia-Ukraine War.

Chapter 13, the key raw materials and key suppliers, and industry chain of Fourth Generation Fluorine-based Refrigerants.

Chapter 14 and 15, to describe Fourth Generation Fluorine-based Refrigerants sales channel, distributors, customers, research findings and conclusion.

## Contents

### 1 MARKET OVERVIEW

- 1.1 Product Overview and Scope of Fourth Generation Fluorine-based Refrigerants
- 1.2 Market Estimation Caveats and Base Year
- 1.3 Market Analysis by Type
  - 1.3.1 Overview: Global Fourth Generation Fluorine-based Refrigerants Consumption Value by Type: 2018 Versus 2022 Versus 2029
  - 1.3.2 R1234ze
  - 1.3.3 R1234yf
  - 1.3.4 Other
- 1.4 Market Analysis by Application
  - 1.4.1 Overview: Global Fourth Generation Fluorine-based Refrigerants Consumption Value by Application: 2018 Versus 2022 Versus 2029
  - 1.4.2 Commercial Refrigeration
  - 1.4.3 Industrial Refrigeration
  - 1.4.4 Other
- 1.5 Global Fourth Generation Fluorine-based Refrigerants Market Size & Forecast
  - 1.5.1 Global Fourth Generation Fluorine-based Refrigerants Consumption Value (2018 & 2022 & 2029)
  - 1.5.2 Global Fourth Generation Fluorine-based Refrigerants Sales Quantity (2018-2029)
  - 1.5.3 Global Fourth Generation Fluorine-based Refrigerants Average Price (2018-2029)

### 2 MANUFACTURERS PROFILES

- 2.1 Chemours
  - 2.1.1 Chemours Details
  - 2.1.2 Chemours Major Business
  - 2.1.3 Chemours Fourth Generation Fluorine-based Refrigerants Product and Services
  - 2.1.4 Chemours Fourth Generation Fluorine-based Refrigerants Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2018-2023)
  - 2.1.5 Chemours Recent Developments/Updates
- 2.2 Honeywell
  - 2.2.1 Honeywell Details
  - 2.2.2 Honeywell Major Business
  - 2.2.3 Honeywell Fourth Generation Fluorine-based Refrigerants Product and Services

2.2.4 Honeywell Fourth Generation Fluorine-based Refrigerants Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2018-2023)

2.2.5 Honeywell Recent Developments/Updates

2.3 Arkema

2.3.1 Arkema Details

2.3.2 Arkema Major Business

2.3.3 Arkema Fourth Generation Fluorine-based Refrigerants Product and Services

2.3.4 Arkema Fourth Generation Fluorine-based Refrigerants Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2018-2023)

2.3.5 Arkema Recent Developments/Updates

2.4 Gas Servei

2.4.1 Gas Servei Details

2.4.2 Gas Servei Major Business

2.4.3 Gas Servei Fourth Generation Fluorine-based Refrigerants Product and Services

2.4.4 Gas Servei Fourth Generation Fluorine-based Refrigerants Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2018-2023)

2.4.5 Gas Servei Recent Developments/Updates

2.5 Zhejiang Juhua

2.5.1 Zhejiang Juhua Details

2.5.2 Zhejiang Juhua Major Business

2.5.3 Zhejiang Juhua Fourth Generation Fluorine-based Refrigerants Product and Services

2.5.4 Zhejiang Juhua Fourth Generation Fluorine-based Refrigerants Sales Quantity, Average Price, Revenue, Gross Margin and Market Share (2018-2023)

2.5.5 Zhejiang Juhua Recent Developments/Updates

### **3 COMPETITIVE ENVIRONMENT: FOURTH GENERATION FLUORINE-BASED REFRIGERANTS BY MANUFACTURER**

3.1 Global Fourth Generation Fluorine-based Refrigerants Sales Quantity by Manufacturer (2018-2023)

3.2 Global Fourth Generation Fluorine-based Refrigerants Revenue by Manufacturer (2018-2023)

3.3 Global Fourth Generation Fluorine-based Refrigerants Average Price by Manufacturer (2018-2023)

3.4 Market Share Analysis (2022)

3.4.1 Producer Shipments of Fourth Generation Fluorine-based Refrigerants by Manufacturer Revenue (\$MM) and Market Share (%): 2022

3.4.2 Top 3 Fourth Generation Fluorine-based Refrigerants Manufacturer Market

Share in 2022

3.4.2 Top 6 Fourth Generation Fluorine-based Refrigerants Manufacturer Market

Share in 2022

3.5 Fourth Generation Fluorine-based Refrigerants Market: Overall Company Footprint Analysis

3.5.1 Fourth Generation Fluorine-based Refrigerants Market: Region Footprint

3.5.2 Fourth Generation Fluorine-based Refrigerants Market: Company Product Type Footprint

3.5.3 Fourth Generation Fluorine-based Refrigerants Market: Company Product Application Footprint

3.6 New Market Entrants and Barriers to Market Entry

3.7 Mergers, Acquisition, Agreements, and Collaborations

## **4 CONSUMPTION ANALYSIS BY REGION**

4.1 Global Fourth Generation Fluorine-based Refrigerants Market Size by Region

4.1.1 Global Fourth Generation Fluorine-based Refrigerants Sales Quantity by Region (2018-2029)

4.1.2 Global Fourth Generation Fluorine-based Refrigerants Consumption Value by Region (2018-2029)

4.1.3 Global Fourth Generation Fluorine-based Refrigerants Average Price by Region (2018-2029)

4.2 North America Fourth Generation Fluorine-based Refrigerants Consumption Value (2018-2029)

4.3 Europe Fourth Generation Fluorine-based Refrigerants Consumption Value (2018-2029)

4.4 Asia-Pacific Fourth Generation Fluorine-based Refrigerants Consumption Value (2018-2029)

4.5 South America Fourth Generation Fluorine-based Refrigerants Consumption Value (2018-2029)

4.6 Middle East and Africa Fourth Generation Fluorine-based Refrigerants Consumption Value (2018-2029)

## **5 MARKET SEGMENT BY TYPE**

5.1 Global Fourth Generation Fluorine-based Refrigerants Sales Quantity by Type (2018-2029)

5.2 Global Fourth Generation Fluorine-based Refrigerants Consumption Value by Type (2018-2029)

5.3 Global Fourth Generation Fluorine-based Refrigerants Average Price by Type (2018-2029)

## **6 MARKET SEGMENT BY APPLICATION**

6.1 Global Fourth Generation Fluorine-based Refrigerants Sales Quantity by Application (2018-2029)

6.2 Global Fourth Generation Fluorine-based Refrigerants Consumption Value by Application (2018-2029)

6.3 Global Fourth Generation Fluorine-based Refrigerants Average Price by Application (2018-2029)

## **7 NORTH AMERICA**

7.1 North America Fourth Generation Fluorine-based Refrigerants Sales Quantity by Type (2018-2029)

7.2 North America Fourth Generation Fluorine-based Refrigerants Sales Quantity by Application (2018-2029)

7.3 North America Fourth Generation Fluorine-based Refrigerants Market Size by Country

7.3.1 North America Fourth Generation Fluorine-based Refrigerants Sales Quantity by Country (2018-2029)

7.3.2 North America Fourth Generation Fluorine-based Refrigerants Consumption Value by Country (2018-2029)

7.3.3 United States Market Size and Forecast (2018-2029)

7.3.4 Canada Market Size and Forecast (2018-2029)

7.3.5 Mexico Market Size and Forecast (2018-2029)

## **8 EUROPE**

8.1 Europe Fourth Generation Fluorine-based Refrigerants Sales Quantity by Type (2018-2029)

8.2 Europe Fourth Generation Fluorine-based Refrigerants Sales Quantity by Application (2018-2029)

8.3 Europe Fourth Generation Fluorine-based Refrigerants Market Size by Country

8.3.1 Europe Fourth Generation Fluorine-based Refrigerants Sales Quantity by Country (2018-2029)

8.3.2 Europe Fourth Generation Fluorine-based Refrigerants Consumption Value by Country (2018-2029)



- 8.3.3 Germany Market Size and Forecast (2018-2029)
- 8.3.4 France Market Size and Forecast (2018-2029)
- 8.3.5 United Kingdom Market Size and Forecast (2018-2029)
- 8.3.6 Russia Market Size and Forecast (2018-2029)
- 8.3.7 Italy Market Size and Forecast (2018-2029)

## **9 ASIA-PACIFIC**

- 9.1 Asia-Pacific Fourth Generation Fluorine-based Refrigerants Sales Quantity by Type (2018-2029)
- 9.2 Asia-Pacific Fourth Generation Fluorine-based Refrigerants Sales Quantity by Application (2018-2029)
- 9.3 Asia-Pacific Fourth Generation Fluorine-based Refrigerants Market Size by Region
  - 9.3.1 Asia-Pacific Fourth Generation Fluorine-based Refrigerants Sales Quantity by Region (2018-2029)
  - 9.3.2 Asia-Pacific Fourth Generation Fluorine-based Refrigerants Consumption Value by Region (2018-2029)
  - 9.3.3 China Market Size and Forecast (2018-2029)
  - 9.3.4 Japan Market Size and Forecast (2018-2029)
  - 9.3.5 Korea Market Size and Forecast (2018-2029)
  - 9.3.6 India Market Size and Forecast (2018-2029)
  - 9.3.7 Southeast Asia Market Size and Forecast (2018-2029)
  - 9.3.8 Australia Market Size and Forecast (2018-2029)

## **10 SOUTH AMERICA**

- 10.1 South America Fourth Generation Fluorine-based Refrigerants Sales Quantity by Type (2018-2029)
- 10.2 South America Fourth Generation Fluorine-based Refrigerants Sales Quantity by Application (2018-2029)
- 10.3 South America Fourth Generation Fluorine-based Refrigerants Market Size by Country
  - 10.3.1 South America Fourth Generation Fluorine-based Refrigerants Sales Quantity by Country (2018-2029)
  - 10.3.2 South America Fourth Generation Fluorine-based Refrigerants Consumption Value by Country (2018-2029)
  - 10.3.3 Brazil Market Size and Forecast (2018-2029)
  - 10.3.4 Argentina Market Size and Forecast (2018-2029)

## **11 MIDDLE EAST & AFRICA**

11.1 Middle East & Africa Fourth Generation Fluorine-based Refrigerants Sales Quantity by Type (2018-2029)

11.2 Middle East & Africa Fourth Generation Fluorine-based Refrigerants Sales Quantity by Application (2018-2029)

11.3 Middle East & Africa Fourth Generation Fluorine-based Refrigerants Market Size by Country

11.3.1 Middle East & Africa Fourth Generation Fluorine-based Refrigerants Sales Quantity by Country (2018-2029)

11.3.2 Middle East & Africa Fourth Generation Fluorine-based Refrigerants Consumption Value by Country (2018-2029)

11.3.3 Turkey Market Size and Forecast (2018-2029)

11.3.4 Egypt Market Size and Forecast (2018-2029)

11.3.5 Saudi Arabia Market Size and Forecast (2018-2029)

11.3.6 South Africa Market Size and Forecast (2018-2029)

## **12 MARKET DYNAMICS**

12.1 Fourth Generation Fluorine-based Refrigerants Market Drivers

12.2 Fourth Generation Fluorine-based Refrigerants Market Restraints

12.3 Fourth Generation Fluorine-based Refrigerants Trends Analysis

12.4 Porters Five Forces Analysis

12.4.1 Threat of New Entrants

12.4.2 Bargaining Power of Suppliers

12.4.3 Bargaining Power of Buyers

12.4.4 Threat of Substitutes

12.4.5 Competitive Rivalry

12.5 Influence of COVID-19 and Russia-Ukraine War

12.5.1 Influence of COVID-19

12.5.2 Influence of Russia-Ukraine War

## **13 RAW MATERIAL AND INDUSTRY CHAIN**

13.1 Raw Material of Fourth Generation Fluorine-based Refrigerants and Key Manufacturers

13.2 Manufacturing Costs Percentage of Fourth Generation Fluorine-based Refrigerants

13.3 Fourth Generation Fluorine-based Refrigerants Production Process

13.4 Fourth Generation Fluorine-based Refrigerants Industrial Chain

## **14 SHIPMENTS BY DISTRIBUTION CHANNEL**

### 14.1 Sales Channel

#### 14.1.1 Direct to End-User

#### 14.1.2 Distributors

### 14.2 Fourth Generation Fluorine-based Refrigerants Typical Distributors

### 14.3 Fourth Generation Fluorine-based Refrigerants Typical Customers

## **15 RESEARCH FINDINGS AND CONCLUSION**

## **16 APPENDIX**

### 16.1 Methodology

### 16.2 Research Process and Data Source

### 16.3 Disclaimer

## List Of Tables

### LIST OF TABLES

Table 1. Global Fourth Generation Fluorine-based Refrigerants Consumption Value by Type, (USD Million), 2018 & 2022 & 2029

Table 2. Global Fourth Generation Fluorine-based Refrigerants Consumption Value by Application, (USD Million), 2018 & 2022 & 2029

Table 3. Chemours Basic Information, Manufacturing Base and Competitors

Table 4. Chemours Major Business

Table 5. Chemours Fourth Generation Fluorine-based Refrigerants Product and Services

Table 6. Chemours Fourth Generation Fluorine-based Refrigerants Sales Quantity (Tons), Average Price (US\$/Ton), Revenue (USD Million), Gross Margin and Market Share (2018-2023)

Table 7. Chemours Recent Developments/Updates

Table 8. Honeywell Basic Information, Manufacturing Base and Competitors

Table 9. Honeywell Major Business

Table 10. Honeywell Fourth Generation Fluorine-based Refrigerants Product and Services

Table 11. Honeywell Fourth Generation Fluorine-based Refrigerants Sales Quantity (Tons), Average Price (US\$/Ton), Revenue (USD Million), Gross Margin and Market Share (2018-2023)

Table 12. Honeywell Recent Developments/Updates

Table 13. Arkema Basic Information, Manufacturing Base and Competitors

Table 14. Arkema Major Business

Table 15. Arkema Fourth Generation Fluorine-based Refrigerants Product and Services

Table 16. Arkema Fourth Generation Fluorine-based Refrigerants Sales Quantity (Tons), Average Price (US\$/Ton), Revenue (USD Million), Gross Margin and Market Share (2018-2023)

Table 17. Arkema Recent Developments/Updates

Table 18. Gas Servei Basic Information, Manufacturing Base and Competitors

Table 19. Gas Servei Major Business

Table 20. Gas Servei Fourth Generation Fluorine-based Refrigerants Product and Services

Table 21. Gas Servei Fourth Generation Fluorine-based Refrigerants Sales Quantity (Tons), Average Price (US\$/Ton), Revenue (USD Million), Gross Margin and Market Share (2018-2023)

Table 22. Gas Servei Recent Developments/Updates

Table 23. Zhejiang Juhua Basic Information, Manufacturing Base and Competitors

Table 24. Zhejiang Juhua Major Business

Table 25. Zhejiang Juhua Fourth Generation Fluorine-based Refrigerants Product and Services

Table 26. Zhejiang Juhua Fourth Generation Fluorine-based Refrigerants Sales Quantity (Tons), Average Price (US\$/Ton), Revenue (USD Million), Gross Margin and Market Share (2018-2023)

Table 27. Zhejiang Juhua Recent Developments/Updates

Table 28. Global Fourth Generation Fluorine-based Refrigerants Sales Quantity by Manufacturer (2018-2023) & (Tons)

Table 29. Global Fourth Generation Fluorine-based Refrigerants Revenue by Manufacturer (2018-2023) & (USD Million)

Table 30. Global Fourth Generation Fluorine-based Refrigerants Average Price by Manufacturer (2018-2023) & (US\$/Ton)

Table 31. Market Position of Manufacturers in Fourth Generation Fluorine-based Refrigerants, (Tier 1, Tier 2, and Tier 3), Based on Consumption Value in 2022

Table 32. Head Office and Fourth Generation Fluorine-based Refrigerants Production Site of Key Manufacturer

Table 33. Fourth Generation Fluorine-based Refrigerants Market: Company Product Type Footprint

Table 34. Fourth Generation Fluorine-based Refrigerants Market: Company Product Application Footprint

Table 35. Fourth Generation Fluorine-based Refrigerants New Market Entrants and Barriers to Market Entry

Table 36. Fourth Generation Fluorine-based Refrigerants Mergers, Acquisition, Agreements, and Collaborations

Table 37. Global Fourth Generation Fluorine-based Refrigerants Sales Quantity by Region (2018-2023) & (Tons)

Table 38. Global Fourth Generation Fluorine-based Refrigerants Sales Quantity by Region (2024-2029) & (Tons)

Table 39. Global Fourth Generation Fluorine-based Refrigerants Consumption Value by Region (2018-2023) & (USD Million)

Table 40. Global Fourth Generation Fluorine-based Refrigerants Consumption Value by Region (2024-2029) & (USD Million)

Table 41. Global Fourth Generation Fluorine-based Refrigerants Average Price by Region (2018-2023) & (US\$/Ton)

Table 42. Global Fourth Generation Fluorine-based Refrigerants Average Price by Region (2024-2029) & (US\$/Ton)

Table 43. Global Fourth Generation Fluorine-based Refrigerants Sales Quantity by

Type (2018-2023) & (Tons)

Table 44. Global Fourth Generation Fluorine-based Refrigerants Sales Quantity by Type (2024-2029) & (Tons)

Table 45. Global Fourth Generation Fluorine-based Refrigerants Consumption Value by Type (2018-2023) & (USD Million)

Table 46. Global Fourth Generation Fluorine-based Refrigerants Consumption Value by Type (2024-2029) & (USD Million)

Table 47. Global Fourth Generation Fluorine-based Refrigerants Average Price by Type (2018-2023) & (US\$/Ton)

Table 48. Global Fourth Generation Fluorine-based Refrigerants Average Price by Type (2024-2029) & (US\$/Ton)

Table 49. Global Fourth Generation Fluorine-based Refrigerants Sales Quantity by Application (2018-2023) & (Tons)

Table 50. Global Fourth Generation Fluorine-based Refrigerants Sales Quantity by Application (2024-2029) & (Tons)

Table 51. Global Fourth Generation Fluorine-based Refrigerants Consumption Value by Application (2018-2023) & (USD Million)

Table 52. Global Fourth Generation Fluorine-based Refrigerants Consumption Value by Application (2024-2029) & (USD Million)

Table 53. Global Fourth Generation Fluorine-based Refrigerants Average Price by Application (2018-2023) & (US\$/Ton)

Table 54. Global Fourth Generation Fluorine-based Refrigerants Average Price by Application (2024-2029) & (US\$/Ton)

Table 55. North America Fourth Generation Fluorine-based Refrigerants Sales Quantity by Type (2018-2023) & (Tons)

Table 56. North America Fourth Generation Fluorine-based Refrigerants Sales Quantity by Type (2024-2029) & (Tons)

Table 57. North America Fourth Generation Fluorine-based Refrigerants Sales Quantity by Application (2018-2023) & (Tons)

Table 58. North America Fourth Generation Fluorine-based Refrigerants Sales Quantity by Application (2024-2029) & (Tons)

Table 59. North America Fourth Generation Fluorine-based Refrigerants Sales Quantity by Country (2018-2023) & (Tons)

Table 60. North America Fourth Generation Fluorine-based Refrigerants Sales Quantity by Country (2024-2029) & (Tons)

Table 61. North America Fourth Generation Fluorine-based Refrigerants Consumption Value by Country (2018-2023) & (USD Million)

Table 62. North America Fourth Generation Fluorine-based Refrigerants Consumption Value by Country (2024-2029) & (USD Million)

Table 63. Europe Fourth Generation Fluorine-based Refrigerants Sales Quantity by Type (2018-2023) & (Tons)

Table 64. Europe Fourth Generation Fluorine-based Refrigerants Sales Quantity by Type (2024-2029) & (Tons)

Table 65. Europe Fourth Generation Fluorine-based Refrigerants Sales Quantity by Application (2018-2023) & (Tons)

Table 66. Europe Fourth Generation Fluorine-based Refrigerants Sales Quantity by Application (2024-2029) & (Tons)

Table 67. Europe Fourth Generation Fluorine-based Refrigerants Sales Quantity by Country (2018-2023) & (Tons)

Table 68. Europe Fourth Generation Fluorine-based Refrigerants Sales Quantity by Country (2024-2029) & (Tons)

Table 69. Europe Fourth Generation Fluorine-based Refrigerants Consumption Value by Country (2018-2023) & (USD Million)

Table 70. Europe Fourth Generation Fluorine-based Refrigerants Consumption Value by Country (2024-2029) & (USD Million)

Table 71. Asia-Pacific Fourth Generation Fluorine-based Refrigerants Sales Quantity by Type (2018-2023) & (Tons)

Table 72. Asia-Pacific Fourth Generation Fluorine-based Refrigerants Sales Quantity by Type (2024-2029) & (Tons)

Table 73. Asia-Pacific Fourth Generation Fluorine-based Refrigerants Sales Quantity by Application (2018-2023) & (Tons)

Table 74. Asia-Pacific Fourth Generation Fluorine-based Refrigerants Sales Quantity by Application (2024-2029) & (Tons)

Table 75. Asia-Pacific Fourth Generation Fluorine-based Refrigerants Sales Quantity by Region (2018-2023) & (Tons)

Table 76. Asia-Pacific Fourth Generation Fluorine-based Refrigerants Sales Quantity by Region (2024-2029) & (Tons)

Table 77. Asia-Pacific Fourth Generation Fluorine-based Refrigerants Consumption Value by Region (2018-2023) & (USD Million)

Table 78. Asia-Pacific Fourth Generation Fluorine-based Refrigerants Consumption Value by Region (2024-2029) & (USD Million)

Table 79. South America Fourth Generation Fluorine-based Refrigerants Sales Quantity by Type (2018-2023) & (Tons)

Table 80. South America Fourth Generation Fluorine-based Refrigerants Sales Quantity by Type (2024-2029) & (Tons)

Table 81. South America Fourth Generation Fluorine-based Refrigerants Sales Quantity by Application (2018-2023) & (Tons)

Table 82. South America Fourth Generation Fluorine-based Refrigerants Sales Quantity

by Application (2024-2029) & (Tons)

Table 83. South America Fourth Generation Fluorine-based Refrigerants Sales Quantity by Country (2018-2023) & (Tons)

Table 84. South America Fourth Generation Fluorine-based Refrigerants Sales Quantity by Country (2024-2029) & (Tons)

Table 85. South America Fourth Generation Fluorine-based Refrigerants Consumption Value by Country (2018-2023) & (USD Million)

Table 86. South America Fourth Generation Fluorine-based Refrigerants Consumption Value by Country (2024-2029) & (USD Million)

Table 87. Middle East & Africa Fourth Generation Fluorine-based Refrigerants Sales Quantity by Type (2018-2023) & (Tons)

Table 88. Middle East & Africa Fourth Generation Fluorine-based Refrigerants Sales Quantity by Type (2024-2029) & (Tons)

Table 89. Middle East & Africa Fourth Generation Fluorine-based Refrigerants Sales Quantity by Application (2018-2023) & (Tons)

Table 90. Middle East & Africa Fourth Generation Fluorine-based Refrigerants Sales Quantity by Application (2024-2029) & (Tons)

Table 91. Middle East & Africa Fourth Generation Fluorine-based Refrigerants Sales Quantity by Region (2018-2023) & (Tons)

Table 92. Middle East & Africa Fourth Generation Fluorine-based Refrigerants Sales Quantity by Region (2024-2029) & (Tons)

Table 93. Middle East & Africa Fourth Generation Fluorine-based Refrigerants Consumption Value by Region (2018-2023) & (USD Million)

Table 94. Middle East & Africa Fourth Generation Fluorine-based Refrigerants Consumption Value by Region (2024-2029) & (USD Million)

Table 95. Fourth Generation Fluorine-based Refrigerants Raw Material

Table 96. Key Manufacturers of Fourth Generation Fluorine-based Refrigerants Raw Materials

Table 97. Fourth Generation Fluorine-based Refrigerants Typical Distributors

Table 98. Fourth Generation Fluorine-based Refrigerants Typical Customers

List of Figures

Figure 1. Fourth Generation Fluorine-based Refrigerants Picture

Figure 2. Global Fourth Generation Fluorine-based Refrigerants Consumption Value by Type, (USD Million), 2018 & 2022 & 2029

Figure 3. Global Fourth Generation Fluorine-based Refrigerants Consumption Value Market Share by Type in 2022

Figure 4. R1234ze Examples

Figure 5. R1234yf Examples

Figure 6. Other Examples



Figure 7. Global Fourth Generation Fluorine-based Refrigerants Consumption Value by Application, (USD Million), 2018 & 2022 & 2029

Figure 8. Global Fourth Generation Fluorine-based Refrigerants Consumption Value Market Share by Application in 2022

Figure 9. Commercial Refrigeration Examples

Figure 10. Industrial Refrigeration Examples

Figure 11. Other Examples

Figure 12. Global Fourth Generation Fluorine-based Refrigerants Consumption Value, (USD Million): 2018 & 2022 & 2029

Figure 13. Global Fourth Generation Fluorine-based Refrigerants Consumption Value and Forecast (2018-2029) & (USD Million)

Figure 14. Global Fourth Generation Fluorine-based Refrigerants Sales Quantity (2018-2029) & (Tons)

Figure 15. Global Fourth Generation Fluorine-based Refrigerants Average Price (2018-2029) & (US\$/Ton)

Figure 16. Global Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Manufacturer in 2022

Figure 17. Global Fourth Generation Fluorine-based Refrigerants Consumption Value Market Share by Manufacturer in 2022

Figure 18. Producer Shipments of Fourth Generation Fluorine-based Refrigerants by Manufacturer Sales Quantity (\$MM) and Market Share (%): 2021

Figure 19. Top 3 Fourth Generation Fluorine-based Refrigerants Manufacturer (Consumption Value) Market Share in 2022

Figure 20. Top 6 Fourth Generation Fluorine-based Refrigerants Manufacturer (Consumption Value) Market Share in 2022

Figure 21. Global Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Region (2018-2029)

Figure 22. Global Fourth Generation Fluorine-based Refrigerants Consumption Value Market Share by Region (2018-2029)

Figure 23. North America Fourth Generation Fluorine-based Refrigerants Consumption Value (2018-2029) & (USD Million)

Figure 24. Europe Fourth Generation Fluorine-based Refrigerants Consumption Value (2018-2029) & (USD Million)

Figure 25. Asia-Pacific Fourth Generation Fluorine-based Refrigerants Consumption Value (2018-2029) & (USD Million)

Figure 26. South America Fourth Generation Fluorine-based Refrigerants Consumption Value (2018-2029) & (USD Million)

Figure 27. Middle East & Africa Fourth Generation Fluorine-based Refrigerants Consumption Value (2018-2029) & (USD Million)

Figure 28. Global Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Type (2018-2029)

Figure 29. Global Fourth Generation Fluorine-based Refrigerants Consumption Value Market Share by Type (2018-2029)

Figure 30. Global Fourth Generation Fluorine-based Refrigerants Average Price by Type (2018-2029) & (US\$/Ton)

Figure 31. Global Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Application (2018-2029)

Figure 32. Global Fourth Generation Fluorine-based Refrigerants Consumption Value Market Share by Application (2018-2029)

Figure 33. Global Fourth Generation Fluorine-based Refrigerants Average Price by Application (2018-2029) & (US\$/Ton)

Figure 34. North America Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Type (2018-2029)

Figure 35. North America Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Application (2018-2029)

Figure 36. North America Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Country (2018-2029)

Figure 37. North America Fourth Generation Fluorine-based Refrigerants Consumption Value Market Share by Country (2018-2029)

Figure 38. United States Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 39. Canada Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 40. Mexico Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 41. Europe Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Type (2018-2029)

Figure 42. Europe Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Application (2018-2029)

Figure 43. Europe Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Country (2018-2029)

Figure 44. Europe Fourth Generation Fluorine-based Refrigerants Consumption Value Market Share by Country (2018-2029)

Figure 45. Germany Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 46. France Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 47. United Kingdom Fourth Generation Fluorine-based Refrigerants

Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 48. Russia Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 49. Italy Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 50. Asia-Pacific Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Type (2018-2029)

Figure 51. Asia-Pacific Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Application (2018-2029)

Figure 52. Asia-Pacific Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Region (2018-2029)

Figure 53. Asia-Pacific Fourth Generation Fluorine-based Refrigerants Consumption Value Market Share by Region (2018-2029)

Figure 54. China Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 55. Japan Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 56. Korea Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 57. India Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 58. Southeast Asia Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 59. Australia Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 60. South America Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Type (2018-2029)

Figure 61. South America Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Application (2018-2029)

Figure 62. South America Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Country (2018-2029)

Figure 63. South America Fourth Generation Fluorine-based Refrigerants Consumption Value Market Share by Country (2018-2029)

Figure 64. Brazil Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 65. Argentina Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 66. Middle East & Africa Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Type (2018-2029)

Figure 67. Middle East & Africa Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Application (2018-2029)

Figure 68. Middle East & Africa Fourth Generation Fluorine-based Refrigerants Sales Quantity Market Share by Region (2018-2029)

Figure 69. Middle East & Africa Fourth Generation Fluorine-based Refrigerants Consumption Value Market Share by Region (2018-2029)

Figure 70. Turkey Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 71. Egypt Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 72. Saudi Arabia Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 73. South Africa Fourth Generation Fluorine-based Refrigerants Consumption Value and Growth Rate (2018-2029) & (USD Million)

Figure 74. Fourth Generation Fluorine-based Refrigerants Market Drivers

Figure 75. Fourth Generation Fluorine-based Refrigerants Market Restraints

Figure 76. Fourth Generation Fluorine-based Refrigerants Market Trends

Figure 77. Porters Five Forces Analysis

Figure 78. Manufacturing Cost Structure Analysis of Fourth Generation Fluorine-based Refrigerants in 2022

Figure 79. Manufacturing Process Analysis of Fourth Generation Fluorine-based Refrigerants

Figure 80. Fourth Generation Fluorine-based Refrigerants Industrial Chain

Figure 81. Sales Quantity Channel: Direct to End-User vs Distributors

Figure 82. Direct Channel Pros & Cons

Figure 83. Indirect Channel Pros & Cons

Figure 84. Methodology

Figure 85. Research Process and Data Source

## I would like to order

Product name: Global Fourth Generation Fluorine-based Refrigerants Market 2023 by Manufacturers, Regions, Type and Application, Forecast to 2029

Product link: <https://marketpublishers.com/r/GA5FB4249E14EN.html>

Price: US\$ 3,480.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/GA5FB4249E14EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970

