

Global Ion Exchange Membrane of All-Vanadium Redox Flow Battery Supply, Demand and Key Producers, 2026-2032

<https://marketpublishers.com/r/GA384E25C7CBEN.html>

Date: July 2026

Pages: 114

Price: US\$ 4,480.00 (Single User License)

ID: GA384E25C7CBEN

Abstracts

The global Ion Exchange Membrane of All-Vanadium Redox Flow Battery market size is expected to reach \$ 569 million by 2032, rising at a market growth of 16.6% CAGR during the forecast period (2026-2032).

Ion exchange membrane of all-vanadium redox flow battery is the selective separator installed inside the VRFB stack to conduct charge-balancing ions while suppressing crossover of vanadium species between positive and negative electrolytes. Membrane resistance, vanadium permeability, swelling, mechanical strength and chemical durability directly determine stack efficiency, electrolyte balancing frequency, cycle life and total cost of ownership.

Upstream supply is concentrated in fluorinated monomers, perfluorosulfonic acid resin, hydrocarbon polymer resin, ePTFE or reinforcement substrates, solvent systems, coating or casting equipment and precision QA tools. The tightest upstream constraint is resin consistency, membrane casting uniformity, impurity control and repeatable electrochemical qualification. PFSA products remain the commercial benchmark, but PBI, SPEEK, SPSPU and other hydrocarbon membranes are increasingly relevant where lower cost and lower fluorine content are required.

In the current market, global production is around 1,800,000 m², with an average selling price of about 104 USD per m² EXW basis. Demand is led by China because large-scale vanadium flow battery projects have moved faster there than in North America or Europe, while overseas demand remains more project-specific and demonstration-led. Procurement is usually project-driven. Large stack and system manufacturers qualify a membrane through single-cell testing, short-stack validation, pilot stacks, full-stack

endurance testing and then framework or project-specific supply contracts. Typical gross margin for qualified membrane producers is estimated at 32.5 percent, with higher margins for integrated PFSA resin-to-membrane suppliers. The margin barrier comes from fluoropolymer chemistry, solvent handling, coating precision, defect inspection, low vanadium crossover, long-term oxidation resistance, customer validation time and the cost of scrap during membrane casting. Top 5 suppliers control approximately 83 percent of global revenue CR5, with Suzhou Kerun, Dongyue Future, Chemours, AGC and Fumatech forming the core supplier group.

From 2026 to 2032, growth will be driven by long-duration storage mandates, renewable curtailment mitigation, grid-side peak shaving, industrial microgrid resilience and a stronger preference for nonflammable stationary storage. The main technology direction is thinner, stronger and lower-resistance membrane, but the industry cannot pursue conductivity alone because excessive vanadium crossover destroys coulombic efficiency and increases rebalancing cost. Cost pressure will push more adoption of domestic PFSA membranes in China and selective use of non-fluorinated membranes where durability is acceptable. Regulatory pressure on fluorinated chemistries will not eliminate PFSA immediately, because VRFB membranes operate in harsh oxidative acid media where replacement requires long qualification cycles, but it will increase interest in hydrocarbon polymers and better end-of-life management. Carbon constraints favor VRFBs for long-life stationary storage, yet high initial system cost and vanadium electrolyte financing remain adoption bottlenecks.

This report studies the global Ion Exchange Membrane of All-Vanadium Redox Flow Battery production, demand, key manufacturers, and key regions.

This report is a detailed and comprehensive analysis of the world market for Ion Exchange Membrane of All-Vanadium Redox Flow Battery and provides market size (US\$ million) and Year-over-Year (YoY) Growth, considering 2025 as the base year. This report explores demand trends and competition, as well as details the characteristics of Ion Exchange Membrane of All-Vanadium Redox Flow Battery that contribute to its increasing demand across many markets.

Highlights and key features of the study

Global Ion Exchange Membrane of All-Vanadium Redox Flow Battery total production and demand, 2021-2032, (K Sqm)

Global Ion Exchange Membrane of All-Vanadium Redox Flow Battery total production value, 2021-2032, (USD Million)

Global Ion Exchange Membrane of All-Vanadium Redox Flow Battery production by region & country, production, value, CAGR, 2021-2032, (USD Million) & (K Sqm), (based on production site)

Global Ion Exchange Membrane of All-Vanadium Redox Flow Battery consumption by region & country, CAGR, 2021-2032 & (K Sqm)

U.S. VS China: Ion Exchange Membrane of All-Vanadium Redox Flow Battery domestic production, consumption, key domestic manufacturers and share

Global Ion Exchange Membrane of All-Vanadium Redox Flow Battery production by manufacturer, production, price, value and market share 2021-2026, (USD Million) & (K Sqm)

Global Ion Exchange Membrane of All-Vanadium Redox Flow Battery production by Membrane Technology, production, value, CAGR, 2021-2032, (USD Million) & (K Sqm)

Global Ion Exchange Membrane of All-Vanadium Redox Flow Battery production by Application, production, value, CAGR, 2021-2032, (USD Million) & (K Sqm)

This report profiles key players in the global Ion Exchange Membrane of All-Vanadium Redox Flow Battery 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 Suzhou Kerun New Materials, Shandong Dongyue Future Hydrogen Energy Materials, The Chemours Company, AGC, Fumatech BWT, Shenzhen ZH Energy, Ionomr Innovations, Guizhou Zhixi Technology, Shanxi Guorun Energy Storage, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Stakeholders would have ease in decision-making through various strategy matrices used in analyzing the World Ion Exchange Membrane of All-Vanadium Redox Flow Battery market

Detailed Segmentation:

Each section contains quantitative market data including market by value (US\$ Millions), volume (production, consumption) & (K Sqm) and average price (US\$/Sq m) by manufacturer, by Membrane Technology, and by Application. Data is given for the years 2021-2032 by year with 2025 as the base year, 2026 as the estimate year, and 2027-2032 as the forecast year.

Global Ion Exchange Membrane of All-Vanadium Redox Flow Battery Market, By

Region:

United States

China

Europe

Japan

South Korea

ASEAN

India

Rest of World

Global Ion Exchange Membrane of All-Vanadium Redox Flow Battery Market,
Segmentation by Membrane Technology:

PFSA Cation Exchange Membrane

Other Ion Exchange Membrane

Global Ion Exchange Membrane of All-Vanadium Redox Flow Battery Market,
Segmentation by Thickness:

Up to 30 ?m

Over 30?50 ?m

Over 50?75 ?m

Over 75?150 ?m

Over 150 ?m

Global Ion Exchange Membrane of All-Vanadium Redox Flow Battery Market, Segmentation by Procurement Mode:

Project-Based Bulk Procurement

Standalone Membrane Procurement

Global Ion Exchange Membrane of All-Vanadium Redox Flow Battery Market, Segmentation by Application:

Front-of-Meter Grid Storage

Renewable Plant Storage

Commercial Industrial Storage

Microgrid Storage

Backup Power Storage

Demonstration Test Systems

Other Stationary Storage

Companies Profiled:

Suzhou Kerun New Materials

Shandong Dongyue Future Hydrogen Energy Materials

The Chemours Company

AGC

Fumatech BWT

Shenzhen ZH Energy

Ionomr Innovations

Guizhou Zhixi Technology

Shanxi Guorun Energy Storage

Key Questions Answered:

1. How big is the global Ion Exchange Membrane of All-Vanadium Redox Flow Battery market?
2. What is the demand of the global Ion Exchange Membrane of All-Vanadium Redox Flow Battery market?
3. What is the year over year growth of the global Ion Exchange Membrane of All-Vanadium Redox Flow Battery market?
4. What is the production and production value of the global Ion Exchange Membrane of All-Vanadium Redox Flow Battery market?
5. Who are the key producers in the global Ion Exchange Membrane of All-Vanadium Redox Flow Battery market?
6. What are the growth factors driving the market demand?

Contents

1 SUPPLY SUMMARY

1.1 Ion Exchange Membrane of All-Vanadium Redox Flow Battery Introduction

1.2 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Supply & Forecast

1.2.1 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value (2021 & 2025 & 2032)

1.2.2 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (2021-2032)

1.2.3 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Pricing Trends (2021-2032)

1.3 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production by Region (Based on Production Site)

1.3.1 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Region (2021-2032)

1.3.2 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production by Region (2021-2032)

1.3.3 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Region (2021-2032)

1.3.4 North America Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (2021-2032)

1.3.5 Europe Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (2021-2032)

1.3.6 China Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (2021-2032)

1.3.7 Japan Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (2021-2032)

1.4 Market Drivers, Restraints and Trends

1.4.1 Ion Exchange Membrane of All-Vanadium Redox Flow Battery Market Drivers

1.4.2 Factors Affecting Demand

1.4.3 Ion Exchange Membrane of All-Vanadium Redox Flow Battery Major Market Trends

2 DEMAND SUMMARY

2.1 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Demand (2021-2032)

2.2 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption by Region

2.2.1 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption by Region (2021-2026)

2.2.2 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption Forecast by Region (2027-2032)

2.3 United States Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption (2021-2032)

2.4 China Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption (2021-2032)

2.5 Europe Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption (2021-2032)

2.6 Japan Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption (2021-2032)

2.7 South Korea Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption (2021-2032)

2.8 ASEAN Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption (2021-2032)

2.9 India Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption (2021-2032)

3 WORLD MANUFACTURERS COMPETITIVE ANALYSIS

3.1 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Manufacturer (2021-2026)

3.2 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production by Manufacturer (2021-2026)

3.3 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Manufacturer (2021-2026)

3.4 Ion Exchange Membrane of All-Vanadium Redox Flow Battery Company Evaluation Quadrant

3.5 Industry Rank and Concentration Rate (CR)

3.5.1 Global Ion Exchange Membrane of All-Vanadium Redox Flow Battery Industry Rank of Major Manufacturers

3.5.2 Global Concentration Ratios (CR4) for Ion Exchange Membrane of All-Vanadium Redox Flow Battery in 2025

3.5.3 Global Concentration Ratios (CR8) for Ion Exchange Membrane of All-Vanadium Redox Flow Battery in 2025

3.6 Ion Exchange Membrane of All-Vanadium Redox Flow Battery Market: Overall

Company Footprint Analysis

3.6.1 Ion Exchange Membrane of All-Vanadium Redox Flow Battery Market: Region Footprint

3.6.2 Ion Exchange Membrane of All-Vanadium Redox Flow Battery Market: Company Product Type Footprint

3.6.3 Ion Exchange Membrane of All-Vanadium Redox Flow Battery Market: Company Product Application Footprint

3.7 Competitive Environment

3.7.1 Historical Structure of the Industry

3.7.2 Barriers of Market Entry

3.7.3 Factors of Competition

3.8 New Entrant and Capacity Expansion Plans

3.9 Mergers, Acquisition, Agreements, and Collaborations

4 UNITED STATES VS CHINA VS REST OF THE WORLD

4.1 United States VS China: Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value Comparison

4.1.1 United States VS China: Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value Comparison (2021 & 2025 & 2032)

4.1.2 United States VS China: Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value Market Share Comparison (2021 & 2025 & 2032)

4.2 United States VS China: Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Comparison

4.2.1 United States VS China: Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Comparison (2021 & 2025 & 2032)

4.2.2 United States VS China: Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Market Share Comparison (2021 & 2025 & 2032)

4.3 United States VS China: Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption Comparison

4.3.1 United States VS China: Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption Comparison (2021 & 2025 & 2032)

4.3.2 United States VS China: Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption Market Share Comparison (2021 & 2025 & 2032)

4.4 United States Based Ion Exchange Membrane of All-Vanadium Redox Flow Battery Manufacturers and Market Share, 2021-2026

4.4.1 United States Based Ion Exchange Membrane of All-Vanadium Redox Flow Battery Manufacturers, Headquarters and Production Site (States, Country)

4.4.2 United States Based Manufacturers Ion Exchange Membrane of All-Vanadium

Redox Flow Battery Production Value (2021-2026)

4.4.3 United States Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (2021-2026)

4.5 China Based Ion Exchange Membrane of All-Vanadium Redox Flow Battery Manufacturers and Market Share

4.5.1 China Based Ion Exchange Membrane of All-Vanadium Redox Flow Battery Manufacturers, Headquarters and Production Site (Province, Country)

4.5.2 China Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value (2021-2026)

4.5.3 China Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (2021-2026)

4.6 Rest of World Based Ion Exchange Membrane of All-Vanadium Redox Flow Battery Manufacturers and Market Share, 2021-2026

4.6.1 Rest of World Based Ion Exchange Membrane of All-Vanadium Redox Flow Battery Manufacturers, Headquarters and Production Site (State, Country)

4.6.2 Rest of World Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value (2021-2026)

4.6.3 Rest of World Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (2021-2026)

5 MARKET ANALYSIS BY MEMBRANE TECHNOLOGY

5.1 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Market Size Overview by Membrane Technology: 2021 VS 2025 VS 2032

5.2 Segment Introduction by Membrane Technology

5.2.1 PFSA Cation Exchange Membrane

5.2.2 Other Ion Exchange Membrane

5.3 Market Segment by Membrane Technology

5.3.1 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production by Membrane Technology (2021-2032)

5.3.2 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Membrane Technology (2021-2032)

5.3.3 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Membrane Technology (2021-2032)

6 MARKET ANALYSIS BY THICKNESS

6.1 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Market Size Overview by Thickness: 2021 VS 2025 VS 2032

6.2 Segment Introduction by Thickness

6.2.1 Up to 30 ?m

6.2.2 Over 30?50 ?m

6.2.3 Over 50?75 ?m

6.2.4 Over 75?150 ?m

6.2.5 Over 150 ?m

6.3 Market Segment by Thickness

6.3.1 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production by Thickness (2021-2032)

6.3.2 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Thickness (2021-2032)

6.3.3 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Thickness (2021-2032)

7 MARKET ANALYSIS BY PROCUREMENT MODE

7.1 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Market Size Overview by Procurement Mode: 2021 VS 2025 VS 2032

7.2 Segment Introduction by Procurement Mode

7.2.1 Project-Based Bulk Procurement

7.2.2 Standalone Membrane Procurement

7.3 Market Segment by Procurement Mode

7.3.1 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production by Procurement Mode (2021-2032)

7.3.2 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Procurement Mode (2021-2032)

7.3.3 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Procurement Mode (2021-2032)

8 MARKET ANALYSIS BY APPLICATION

8.1 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Market Size Overview by Application: 2021 VS 2025 VS 2032

8.2 Segment Introduction by Application

8.2.1 Front-of-Meter Grid Storage

8.2.2 Renewable Plant Storage

8.2.3 Commercial Industrial Storage

8.2.4 Microgrid Storage

8.2.5 Backup Power Storage

8.2.6 Demonstration Test Systems

8.2.7 Other Stationary Storage

8.3 Market Segment by Application

8.3.1 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production by Application (2021-2032)

8.3.2 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Application (2021-2032)

8.3.3 World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Application (2021-2032)

9 COMPANY PROFILES

9.1 Suzhou Kerun New Materials

9.1.1 Suzhou Kerun New Materials Details

9.1.2 Suzhou Kerun New Materials Major Business

9.1.3 Suzhou Kerun New Materials Ion Exchange Membrane of All-Vanadium Redox Flow Battery Product and Services

9.1.4 Suzhou Kerun New Materials Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production, Price, Value, Gross Margin and Market Share (2021-2026)

9.1.5 Suzhou Kerun New Materials Recent Developments/Updates

9.1.6 Suzhou Kerun New Materials Competitive Strengths & Weaknesses

9.2 Shandong Dongyue Future Hydrogen Energy Materials

9.2.1 Shandong Dongyue Future Hydrogen Energy Materials Details

9.2.2 Shandong Dongyue Future Hydrogen Energy Materials Major Business

9.2.3 Shandong Dongyue Future Hydrogen Energy Materials Ion Exchange Membrane of All-Vanadium Redox Flow Battery Product and Services

9.2.4 Shandong Dongyue Future Hydrogen Energy Materials Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production, Price, Value, Gross Margin and Market Share (2021-2026)

9.2.5 Shandong Dongyue Future Hydrogen Energy Materials Recent Developments/Updates

9.2.6 Shandong Dongyue Future Hydrogen Energy Materials Competitive Strengths & Weaknesses

9.3 The Chemours Company

9.3.1 The Chemours Company Details

9.3.2 The Chemours Company Major Business

9.3.3 The Chemours Company Ion Exchange Membrane of All-Vanadium Redox Flow Battery Product and Services

9.3.4 The Chemours Company Ion Exchange Membrane of All-Vanadium Redox Flow

Battery Production, Price, Value, Gross Margin and Market Share (2021-2026)

9.3.5 The Chemours Company Recent Developments/Updates

9.3.6 The Chemours Company Competitive Strengths & Weaknesses

9.4 AGC

9.4.1 AGC Details

9.4.2 AGC Major Business

9.4.3 AGC Ion Exchange Membrane of All-Vanadium Redox Flow Battery Product and Services

9.4.4 AGC Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production, Price, Value, Gross Margin and Market Share (2021-2026)

9.4.5 AGC Recent Developments/Updates

9.4.6 AGC Competitive Strengths & Weaknesses

9.5 Fumatech BWT

9.5.1 Fumatech BWT Details

9.5.2 Fumatech BWT Major Business

9.5.3 Fumatech BWT Ion Exchange Membrane of All-Vanadium Redox Flow Battery Product and Services

9.5.4 Fumatech BWT Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production, Price, Value, Gross Margin and Market Share (2021-2026)

9.5.5 Fumatech BWT Recent Developments/Updates

9.5.6 Fumatech BWT Competitive Strengths & Weaknesses

9.6 Shenzhen ZH Energy

9.6.1 Shenzhen ZH Energy Details

9.6.2 Shenzhen ZH Energy Major Business

9.6.3 Shenzhen ZH Energy Ion Exchange Membrane of All-Vanadium Redox Flow Battery Product and Services

9.6.4 Shenzhen ZH Energy Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production, Price, Value, Gross Margin and Market Share (2021-2026)

9.6.5 Shenzhen ZH Energy Recent Developments/Updates

9.6.6 Shenzhen ZH Energy Competitive Strengths & Weaknesses

9.7 Ionomr Innovations

9.7.1 Ionomr Innovations Details

9.7.2 Ionomr Innovations Major Business

9.7.3 Ionomr Innovations Ion Exchange Membrane of All-Vanadium Redox Flow Battery Product and Services

9.7.4 Ionomr Innovations Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production, Price, Value, Gross Margin and Market Share (2021-2026)

9.7.5 Ionomr Innovations Recent Developments/Updates

9.7.6 Ionomr Innovations Competitive Strengths & Weaknesses

9.8 Guizhou Zhixi Technology

9.8.1 Guizhou Zhixi Technology Details

9.8.2 Guizhou Zhixi Technology Major Business

9.8.3 Guizhou Zhixi Technology Ion Exchange Membrane of All-Vanadium Redox Flow Battery Product and Services

9.8.4 Guizhou Zhixi Technology Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production, Price, Value, Gross Margin and Market Share (2021-2026)

9.8.5 Guizhou Zhixi Technology Recent Developments/Updates

9.8.6 Guizhou Zhixi Technology Competitive Strengths & Weaknesses

9.9 Shanxi Guorun Energy Storage

9.9.1 Shanxi Guorun Energy Storage Details

9.9.2 Shanxi Guorun Energy Storage Major Business

9.9.3 Shanxi Guorun Energy Storage Ion Exchange Membrane of All-Vanadium Redox Flow Battery Product and Services

9.9.4 Shanxi Guorun Energy Storage Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production, Price, Value, Gross Margin and Market Share (2021-2026)

9.9.5 Shanxi Guorun Energy Storage Recent Developments/Updates

9.9.6 Shanxi Guorun Energy Storage Competitive Strengths & Weaknesses

10 INDUSTRY CHAIN ANALYSIS

10.1 Ion Exchange Membrane of All-Vanadium Redox Flow Battery Industry Chain

10.2 Ion Exchange Membrane of All-Vanadium Redox Flow Battery Upstream Analysis

10.2.1 Ion Exchange Membrane of All-Vanadium Redox Flow Battery Core Raw Materials

10.2.2 Main Manufacturers of Ion Exchange Membrane of All-Vanadium Redox Flow Battery Core Raw Materials

10.3 Midstream Analysis

10.4 Downstream Analysis

10.5 Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Mode

10.6 Ion Exchange Membrane of All-Vanadium Redox Flow Battery Procurement Model

10.7 Ion Exchange Membrane of All-Vanadium Redox Flow Battery Industry Sales Model and Sales Channels

10.7.1 Ion Exchange Membrane of All-Vanadium Redox Flow Battery Sales Model

10.7.2 Ion Exchange Membrane of All-Vanadium Redox Flow Battery Typical Distributors

11 RESEARCH FINDINGS AND CONCLUSION

12 APPENDIX

12.1 Methodology

12.2 Research Process and Data Source

12.3 Disclaimer

List Of Tables

LIST OF TABLES

- Table 1. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Region (2021, 2025 and 2032) & (USD Million)
- Table 2. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Region (2021-2026) & (USD Million)
- Table 3. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Region (2027-2032) & (USD Million)
- Table 4. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value Market Share by Region (2021-2026)
- Table 5. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value Market Share by Region (2027-2032)
- Table 6. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production by Region (2021-2026) & (K Sqm)
- Table 7. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production by Region (2027-2032) & (K Sqm)
- Table 8. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Market Share by Region (2021-2026)
- Table 9. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Market Share by Region (2027-2032)
- Table 10. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Region (2021-2026) & (US\$/Sq m)
- Table 11. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Region (2027-2032) & (US\$/Sq m)
- Table 12. Ion Exchange Membrane of All-Vanadium Redox Flow Battery Major Market Trends
- Table 13. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption Growth Rate Forecast by Region (2021 & 2025 & 2032) & (K Sqm)
- Table 14. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption by Region (2021-2026) & (K Sqm)
- Table 15. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption Forecast by Region (2027-2032) & (K Sqm)
- Table 16. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Manufacturer (2021-2026) & (USD Million)
- Table 17. Production Value Market Share of Key Ion Exchange Membrane of All-Vanadium Redox Flow Battery Producers in 2025
- Table 18. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery

Production by Manufacturer (2021-2026) & (K Sqm)

Table 19. Production Market Share of Key Ion Exchange Membrane of All-Vanadium Redox Flow Battery Producers in 2025

Table 20. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Manufacturer (2021-2026) & (US\$/Sq m)

Table 21. Global Ion Exchange Membrane of All-Vanadium Redox Flow Battery Company Evaluation Quadrant

Table 22. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Industry Rank of Major Manufacturers, Based on Production Value in 2025

Table 23. Head Office and Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Site of Key Manufacturer

Table 24. Ion Exchange Membrane of All-Vanadium Redox Flow Battery Market: Company Product Type Footprint

Table 25. Ion Exchange Membrane of All-Vanadium Redox Flow Battery Market: Company Product Application Footprint

Table 26. Ion Exchange Membrane of All-Vanadium Redox Flow Battery Competitive Factors

Table 27. Ion Exchange Membrane of All-Vanadium Redox Flow Battery New Entrant and Capacity Expansion Plans

Table 28. Ion Exchange Membrane of All-Vanadium Redox Flow Battery Mergers & Acquisitions Activity

Table 29. United States VS China Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value Comparison, (2021 & 2025 & 2032) & (USD Million)

Table 30. United States VS China Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Comparison, (2021 & 2025 & 2032) & (K Sqm)

Table 31. United States VS China Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption Comparison, (2021 & 2025 & 2032) & (K Sqm)

Table 32. United States Based Ion Exchange Membrane of All-Vanadium Redox Flow Battery Manufacturers, Headquarters and Production Site (States, Country)

Table 33. United States Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value, (2021-2026) & (USD Million)

Table 34. United States Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value Market Share (2021-2026)

Table 35. United States Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (2021-2026) & (K Sqm)

Table 36. United States Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Market Share (2021-2026)

Table 37. China Based Ion Exchange Membrane of All-Vanadium Redox Flow Battery Manufacturers, Headquarters and Production Site (Province, Country)

Table 38. China Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value, (2021-2026) & (USD Million)

Table 39. China Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value Market Share (2021-2026)

Table 40. China Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production, (2021-2026) & (K Sqm)

Table 41. China Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Market Share (2021-2026)

Table 42. Rest of World Based Ion Exchange Membrane of All-Vanadium Redox Flow Battery Manufacturers, Headquarters and Production Site (State, Country)

Table 43. Rest of World Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value, (2021-2026) & (USD Million)

Table 44. Rest of World Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value Market Share (2021-2026)

Table 45. Rest of World Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production, (2021-2026) & (K Sqm)

Table 46. Rest of World Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Market Share (2021-2026)

Table 47. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Membrane Technology, (USD Million), 2021 & 2025 & 2032

Table 48. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production by Membrane Technology (2021-2026) & (K Sqm)

Table 49. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production by Membrane Technology (2027-2032) & (K Sqm)

Table 50. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Membrane Technology (2021-2026) & (USD Million)

Table 51. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Membrane Technology (2027-2032) & (USD Million)

Table 52. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Membrane Technology (2021-2026) & (US\$/Sq m)

Table 53. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Membrane Technology (2027-2032) & (US\$/Sq m)

Table 54. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Thickness, (USD Million), 2021 & 2025 & 2032

Table 55. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production by Thickness (2021-2026) & (K Sqm)

Table 56. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production by Thickness (2027-2032) & (K Sqm)

Table 57. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery

Production Value by Thickness (2021-2026) & (USD Million)

Table 58. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery

Production Value by Thickness (2027-2032) & (USD Million)

Table 59. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Thickness (2021-2026) & (US\$/Sq m)

Table 60. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Thickness (2027-2032) & (US\$/Sq m)

Table 61. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Procurement Mode, (USD Million), 2021 & 2025 & 2032

Table 62. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production by Procurement Mode (2021-2026) & (K Sqm)

Table 63. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production by Procurement Mode (2027-2032) & (K Sqm)

Table 64. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Procurement Mode (2021-2026) & (USD Million)

Table 65. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Procurement Mode (2027-2032) & (USD Million)

Table 66. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Procurement Mode (2021-2026) & (US\$/Sq m)

Table 67. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Procurement Mode (2027-2032) & (US\$/Sq m)

Table 68. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Application, (USD Million), 2021 & 2025 & 2032

Table 69. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production by Application (2021-2026) & (K Sqm)

Table 70. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production by Application (2027-2032) & (K Sqm)

Table 71. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Application (2021-2026) & (USD Million)

Table 72. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Application (2027-2032) & (USD Million)

Table 73. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Application (2021-2026) & (US\$/Sq m)

Table 74. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Application (2027-2032) & (US\$/Sq m)

Table 75. Suzhou Kerun New Materials Basic Information, Manufacturing Base and Competitors

Table 76. Suzhou Kerun New Materials Major Business

Table 77. Suzhou Kerun New Materials Ion Exchange Membrane of All-Vanadium

Redox Flow Battery Product and Services

Table 78. Suzhou Kerun New Materials Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (K Sqm), Price (US\$/Sq m), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 79. Suzhou Kerun New Materials Recent Developments/Updates

Table 80. Suzhou Kerun New Materials Competitive Strengths & Weaknesses

Table 81. Shandong Dongyue Future Hydrogen Energy Materials Basic Information, Manufacturing Base and Competitors

Table 82. Shandong Dongyue Future Hydrogen Energy Materials Major Business

Table 83. Shandong Dongyue Future Hydrogen Energy Materials Ion Exchange Membrane of All-Vanadium Redox Flow Battery Product and Services

Table 84. Shandong Dongyue Future Hydrogen Energy Materials Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (K Sqm), Price (US\$/Sq m), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 85. Shandong Dongyue Future Hydrogen Energy Materials Recent Developments/Updates

Table 86. Shandong Dongyue Future Hydrogen Energy Materials Competitive Strengths & Weaknesses

Table 87. The Chemours Company Basic Information, Manufacturing Base and Competitors

Table 88. The Chemours Company Major Business

Table 89. The Chemours Company Ion Exchange Membrane of All-Vanadium Redox Flow Battery Product and Services

Table 90. The Chemours Company Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (K Sqm), Price (US\$/Sq m), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 91. The Chemours Company Recent Developments/Updates

Table 92. The Chemours Company Competitive Strengths & Weaknesses

Table 93. AGC Basic Information, Manufacturing Base and Competitors

Table 94. AGC Major Business

Table 95. AGC Ion Exchange Membrane of All-Vanadium Redox Flow Battery Product and Services

Table 96. AGC Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (K Sqm), Price (US\$/Sq m), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 97. AGC Recent Developments/Updates

Table 98. AGC Competitive Strengths & Weaknesses

Table 99. Fumatech BWT Basic Information, Manufacturing Base and Competitors

Table 100. Fumatech BWT Major Business

Table 101. Fumatech BWT Ion Exchange Membrane of All-Vanadium Redox Flow Battery Product and Services

Table 102. Fumatech BWT Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (K Sqm), Price (US\$/Sq m), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 103. Fumatech BWT Recent Developments/Updates

Table 104. Fumatech BWT Competitive Strengths & Weaknesses

Table 105. Shenzhen ZH Energy Basic Information, Manufacturing Base and Competitors

Table 106. Shenzhen ZH Energy Major Business

Table 107. Shenzhen ZH Energy Ion Exchange Membrane of All-Vanadium Redox Flow Battery Product and Services

Table 108. Shenzhen ZH Energy Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (K Sqm), Price (US\$/Sq m), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 109. Shenzhen ZH Energy Recent Developments/Updates

Table 110. Shenzhen ZH Energy Competitive Strengths & Weaknesses

Table 111. Ionomr Innovations Basic Information, Manufacturing Base and Competitors

Table 112. Ionomr Innovations Major Business

Table 113. Ionomr Innovations Ion Exchange Membrane of All-Vanadium Redox Flow Battery Product and Services

Table 114. Ionomr Innovations Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (K Sqm), Price (US\$/Sq m), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 115. Ionomr Innovations Recent Developments/Updates

Table 116. Ionomr Innovations Competitive Strengths & Weaknesses

Table 117. Guizhou Zhixi Technology Basic Information, Manufacturing Base and Competitors

Table 118. Guizhou Zhixi Technology Major Business

Table 119. Guizhou Zhixi Technology Ion Exchange Membrane of All-Vanadium Redox Flow Battery Product and Services

Table 120. Guizhou Zhixi Technology Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (K Sqm), Price (US\$/Sq m), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 121. Guizhou Zhixi Technology Recent Developments/Updates

Table 122. Guizhou Zhixi Technology Competitive Strengths & Weaknesses

Table 123. Shanxi Guorun Energy Storage Basic Information, Manufacturing Base and Competitors

Table 124. Shanxi Guorun Energy Storage Major Business

Table 125. Shanxi Guorun Energy Storage Ion Exchange Membrane of All-Vanadium Redox Flow Battery Product and Services

Table 126. Shanxi Guorun Energy Storage Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production (K Sqm), Price (US\$/Sq m), Production Value (USD Million), Gross Margin and Market Share (2021-2026)

Table 127. Shanxi Guorun Energy Storage Recent Developments/Updates

Table 128. Shanxi Guorun Energy Storage Competitive Strengths & Weaknesses

Table 129. Global Key Players of Ion Exchange Membrane of All-Vanadium Redox Flow Battery Upstream (Raw Materials)

Table 130. Global Ion Exchange Membrane of All-Vanadium Redox Flow Battery Typical Customers

Table 131. Ion Exchange Membrane of All-Vanadium Redox Flow Battery Typical Distributors

List Of Figures

LIST OF FIGURES

Figure 1. Ion Exchange Membrane of All-Vanadium Redox Flow Battery Picture

Figure 2. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery
Production Value: 2021 & 2025 & 2032, (USD Million)

Figure 3. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery
Production Value and Forecast (2021-2032) & (USD Million)

Figure 4. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery
Production (2021-2032) & (K Sqm)

Figure 5. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average
Price (2021-2032) & (US\$/Sq m)

Figure 6. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery
Production Value Market Share by Region (2021-2032)

Figure 7. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery
Production Market Share by Region (2021-2032)

Figure 8. North America Ion Exchange Membrane of All-Vanadium Redox Flow Battery
Production (2021-2032) & (K Sqm)

Figure 9. Europe Ion Exchange Membrane of All-Vanadium Redox Flow Battery
Production (2021-2032) & (K Sqm)

Figure 10. China Ion Exchange Membrane of All-Vanadium Redox Flow Battery
Production (2021-2032) & (K Sqm)

Figure 11. Japan Ion Exchange Membrane of All-Vanadium Redox Flow Battery
Production (2021-2032) & (K Sqm)

Figure 12. Ion Exchange Membrane of All-Vanadium Redox Flow Battery Market
Drivers

Figure 13. Factors Affecting Demand

Figure 14. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery
Consumption (2021-2032) & (K Sqm)

Figure 15. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery
Consumption Market Share by Region (2021-2032)

Figure 16. United States Ion Exchange Membrane of All-Vanadium Redox Flow Battery
Consumption (2021-2032) & (K Sqm)

Figure 17. China Ion Exchange Membrane of All-Vanadium Redox Flow Battery
Consumption (2021-2032) & (K Sqm)

Figure 18. Europe Ion Exchange Membrane of All-Vanadium Redox Flow Battery
Consumption (2021-2032) & (K Sqm)

Figure 19. Japan Ion Exchange Membrane of All-Vanadium Redox Flow Battery

Consumption (2021-2032) & (K Sqm)

Figure 20. South Korea Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption (2021-2032) & (K Sqm)

Figure 21. ASEAN Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption (2021-2032) & (K Sqm)

Figure 22. India Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption (2021-2032) & (K Sqm)

Figure 23. Producer Shipments of Ion Exchange Membrane of All-Vanadium Redox Flow Battery by Manufacturer Revenue (\$MM) and Market Share (%): 2025

Figure 24. Global Four-firm Concentration Ratios (CR4) for Ion Exchange Membrane of All-Vanadium Redox Flow Battery Markets in 2025

Figure 25. Global Four-firm Concentration Ratios (CR8) for Ion Exchange Membrane of All-Vanadium Redox Flow Battery Markets in 2025

Figure 26. United States VS China: Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value Market Share Comparison (2021 & 2025 & 2032)

Figure 27. United States VS China: Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Market Share Comparison (2021 & 2025 & 2032)

Figure 28. United States VS China: Ion Exchange Membrane of All-Vanadium Redox Flow Battery Consumption Market Share Comparison (2021 & 2025 & 2032)

Figure 29. United States Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Market Share 2025

Figure 30. China Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Market Share 2025

Figure 31. Rest of World Based Manufacturers Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Market Share 2025

Figure 32. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Membrane Technology, (USD Million), 2021 & 2025 & 2032

Figure 33. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value Market Share by Membrane Technology in 2025

Figure 34. PFSA Cation Exchange Membrane

Figure 35. Other Ion Exchange Membrane

Figure 36. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Market Share by Membrane Technology (2021-2032)

Figure 37. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value Market Share by Membrane Technology (2021-2032)

Figure 38. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Membrane Technology (2021-2032) & (US\$/Sq m)

Figure 39. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Thickness, (USD Million), 2021 & 2025 & 2032

Figure 40. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value Market Share by Thickness in 2025

Figure 41. Up to 30 ?m

Figure 42. Over 30?50 ?m

Figure 43. Over 50?75 ?m

Figure 44. Over 75?150 ?m

Figure 45. Over 150 ?m

Figure 46. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Market Share by Thickness (2021-2032)

Figure 47. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value Market Share by Thickness (2021-2032)

Figure 48. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Thickness (2021-2032) & (US\$/Sq m)

Figure 49. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Procurement Mode, (USD Million), 2021 & 2025 & 2032

Figure 50. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value Market Share by Procurement Mode in 2025

Figure 51. Project-Based Bulk Procurement

Figure 52. Standalone Membrane Procurement

Figure 53. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Market Share by Procurement Mode (2021-2032)

Figure 54. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value Market Share by Procurement Mode (2021-2032)

Figure 55. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Average Price by Procurement Mode (2021-2032) & (US\$/Sq m)

Figure 56. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value by Application, (USD Million), 2021 & 2025 & 2032

Figure 57. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Value Market Share by Application in 2025

Figure 58. Front-of-Meter Grid Storage

Figure 59. Renewable Plant Storage

Figure 60. Commercial Industrial Storage

Figure 61. Microgrid Storage

Figure 62. Backup Power Storage

Figure 63. Demonstration Test Systems

Figure 64. Other Stationary Storage

Figure 65. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery Production Market Share by Application (2021-2032)

Figure 66. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery

Production Value Market Share by Application (2021-2032)

Figure 67. World Ion Exchange Membrane of All-Vanadium Redox Flow Battery
Average Price by Application (2021-2032) & (US\$/Sq m)

Figure 68. Ion Exchange Membrane of All-Vanadium Redox Flow Battery Industry
Chain

Figure 69. Ion Exchange Membrane of All-Vanadium Redox Flow Battery Procurement
Model

Figure 70. Ion Exchange Membrane of All-Vanadium Redox Flow Battery Sales Model

Figure 71. Ion Exchange Membrane of All-Vanadium Redox Flow Battery Sales
Channels, Direct Sales, and Distribution

Figure 72. Methodology

Figure 73. Research Process and Data Source

I would like to order

Product name: Global Ion Exchange Membrane of All-Vanadium Redox Flow Battery Supply, Demand and Key Producers, 2026-2032

Product link: <https://marketpublishers.com/r/GA384E25C7CBEN.html>

Price: US\$ 4,480.00 (Single User License / Electronic Delivery)

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

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/GA384E25C7CBEN.html>