+357 96 030922
info@marketpublishers.com

Gas Separation Membrane Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2024 – 2032

https://marketpublishers.com/r/GF2C3F830F33EN.html
Date: September 2024
Pages: 205
Price: US$ 4,365.00 (Single User License)
ID: GF2C3F830F33EN

Abstracts

The Global Gas Separation Membrane Market was valued at USD 1.2 billion in 2023. Projections indicate a CAGR of 6.5% from 2024 to 2032. The industry predominantly utilizes polyimide and polyaramide materials for gas separation membranes, thanks to their remarkable thermal and chemical stability, coupled with high permeability and selectivity. These polymers can endure extreme conditions, such as elevated temperatures and harsh chemicals, making them apt for applications including hydrogen recovery, carbon dioxide removal, and nitrogen generation. The surging demand for nitrogen and oxygen separation propels the gas separation membrane industry. Sectors like pharmaceuticals, food and beverage, chemicals, and electronics increasingly seek high-purity nitrogen and oxygen.

These gases serve diverse purposes, from inert gas blanketing to medical oxygen supply. Gas separation membranes emerge as a cost-effective and energy-efficient solution, enabling industries to generate gases on-site, sidestepping the need for traditional bulk gas deliveries. As industrial processes evolve and sustainability gains prominence, the appetite for membrane-based gas separation systems swells, driving market growth. The industry is segmented into material type, module, application, and region.

Market segmentation by material type includes polyimide & polyaramide, cellulose acetate, polysulfone, and others. In 2023, polyimide & polyaramide commanded a market value of USD 550 million, with projections reaching USD 980 million by 2032. Their dominance stems from superior thermal stability, mechanical strength, and heightened selectivity in gas separation. These attributes make them particularly effective in industrial applications for separating gases like nitrogen, oxygen, and carbon dioxide. Market segmentation by module includes hollow fiber, spiral wound, plate & frame, and others.

+357 96 030922
info@marketpublishers.com

Hollow fiber, holding a 52% market share in 2023, is anticipated to see significant growth by 2032. The hollow fiber membranes' lead in the gas separation market is attributed to their high surface-area-to-volume ratio, facilitating efficient gas separation in compact systems. Their design allows for cost-effective scalability, processing large gas volumes in a more compact footprint than alternative membrane types. In 2023, the Asia Pacific led the global gas separation membrane market, generating revenues of USD 410 million. The region's dominance is fueled by swift industrialization, a burgeoning manufacturing sector, and escalating energy demands.Key industries, including petrochemicals, pharmaceuticals, and food and beverage, drive the region's substantial consumption of gas separation technologies.

+357 96 030922
info@marketpublishers.com

Contents

Report Content

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

CHAPTER 8 MARKET SIZE AND FORECAST, BY REGION, 2021-2032 (USD BILLION, KILO TONS)

CHAPTER 9 COMPANY PROFILES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Gas Separation Membrane Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2024 – 2032

Product link: https://marketpublishers.com/r/GF2C3F830F33EN.html

Price: US$ 4,365.00 (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/GF2C3F830F33EN.html