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# Liquid Nitrogen - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

Market Report | 2024-02-17 | 120 pages | Mordor Intelligence

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**Report description:**

The Liquid Nitrogen Market size is estimated at 125.93 Million tons in 2024, and is expected to reach 158.82 Million tons by 2029, growing at a CAGR of 4.75% during the forecast period (2024-2029).

COVID-19 hampered the market growth. The transportation industry suffered from the pandemic due to restrictions worldwide. However, due to the pandemic, the healthcare industry witnessed huge growth because of increased health concerns. It increased the demand for the liquid nitrogen market, as the demand for medical devices increased tremendously. Currently, the market recovered from the pandemic and is growing at a significant rate.

Key Highlights
-Over the medium term, the increasing demand from the chemical and pharmaceutical industry and the growing application in the healthcare industry are driving market growth.
-However, the regulatory restrictions in maintaining liquid nitrogen plants are expected to hinder the market's growth.
-Nevertheless, developing new manufacturing techniques will likely create opportunities for the market in the coming years.
-The Asia-Pacific region dominated the global market with the largest consumption from countries such as China, India, and Japan.

Liquid Nitrogen Market Trends

Growing Demand from the Chemical and Pharmaceutical Industry

- Liquid nitrogen is the liquefied form of the element nitrogen produced commercially by the fractional distillation of liquid air. It is used in many cooling and cryogenic applications.
- Owing to its non-toxic, odorless, colorless, chemically inert, and inflammable properties, its application is highly used in the chemical and pharmaceutical industry.
- The boiling point of nitrogen is -195 degrees Celsius. Because of this, its application as a coolant and refrigerant in the chemical and pharmaceutical industry is rapidly increasing.
- The pharmaceutical industry in China is one of the largest in the world. The country produces generics, therapeutic medicines, active pharmaceutical ingredients, and traditional Chinese medicine.
- According to the National Bureau of Statistics of China, in June 2022, China's monthly output volume of chemical active pharmaceutical ingredients (API) topped 300,000 metric tonnes. The figure gradually climbed over the previous three years, indicating a development in China's chemical medication business. Active pharmaceutical ingredients are medicinal chemicals responsible for a condition's therapy.
- Moreover, according to the Department of Pharmaceuticals, India is the world's largest supplier of generic medications, and as of February 2022, the country supplied pharmaceuticals worth more than USD 22 billion. Regarding volume, Indian pharmaceuticals accounted for 20% of worldwide generic drug exports, with North America accounting for the lion's share. It is expected to value about USD 100 billion by 2030, increasing the scope for this market during the coming years.
- The fact that nitrogen is a dry, inert gas is one of its greatest advantages. It implies that it won't interact with other substances. As a result, oxygen and other toxic or unwanted gases, particularly oxygen, can be replaced by N2.
- Nitrogen is frequently used to manufacture pharmaceuticals to transfer the reaction mixture from one container to another. When delivering liquid or powdered medications, it is crucial to employ safe, inert gas since doing so might be hazardous. Several pharmaceutical chemicals may be harmed or even explode if exposed to oxygen or water vapor.
- According to the Food and Drug Administration (Center for Drug Evaluation and Research (CDER)), it authorized 37 new medications in 2022. The amount of new pharmaceutical products hitting the market each year fluctuates greatly. In 2021, there were 50 approvals for unique medications.
- Owing to all the factors mentioned above, the demand for liquid nitrogen is expected to grow from the chemical and pharmaceutical industries during the forecast period.

Asia-Pacific Region to Dominate the Market

- The Asia-Pacific region is expected to dominate the market for liquid nitrogen during the forecast period. The growing chemical and pharmaceutical industries in countries such as China, India, and Japan are boosting the demand for the liquid nitrogen market in the region.
- According to China's Healthcare Report, China's pharmaceutical and biopharmaceutical combined R&D investment is projected to expand at a compound annual rate of 23% through 2023. It will be possible when it reaches USD 49 billion, accounting for 23% of global drug development and testing spending.
- The country includes a large and diverse domestic drug industry, comprising around 5,000 manufacturers, of which many are small- or medium-sized companies. It is expected to boost the growth of liquid nitrogen usage in the pharmaceutical industry.
- The National Medical Products Administration and the National Administration of Traditional Chinese Medicine collaborated to release the "14th Five-Year Plan for Pharmaceutical Industry Growth." The 14th Five-Year Plan specifies the aims and directions for China's pharmaceutical industry's development during the following five years.
- The 14th Five-Year Plan was developed in compliance with the ideas and standards outlined in the Framework of the 14th Five-Year Plan for National Economic and Social Development and Long-Term Goals for 2035.
- India is expected to witness robust growth in its chemical industry. The government predicts the chemical industry to reach USD 304 billion by 2025, with opportunities offered by the anticipated increase in demand by about 9% per annum over the next five years.

- According to the Scheme of Integrated Cold Chain and Value Addition Infrastructure, about 356 Cold Chain Projects in the food processing industry were approved in India in 2022, creating an increasing demand for liquid nitrogen.
- Some leading producers of liquid nitrogen in the Asia-Pacific region include Linde PLC, Southern Industrial Gas Sdn Bhd, MVS Engineering Pvt. Ltd, and TAIYO NIPPON SANSO CORPORATION.
- Therefore, the factors above are expected to boost the demand for the liquid nitrogen market in the region during the forecast period.

Liquid Nitrogen Industry Overview

The liquid nitrogen market is fragmented in nature. Some of the major players in the market include Air Liquide, Air Products and Chemicals, Inc., Gulf Cryo, Linde plc, and TAIYO NIPPON SANSO CORPORATION, among others.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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