

Liquid Nitrogen Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2022-2027

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Abstracts

The global liquid nitrogen market reached a value of US\$ 17.1 Billion in 2021. Looking forward, IMARC Group expects the market to reach US\$ 24.3 Billion by 2027, exhibiting a CAGR of 6.16% during 2022-2027. Keeping in mind the uncertainties of COVID-19, we are continuously tracking and evaluating the direct as well as the indirect influence of the pandemic on different end use industries. These insights are included in the report as a major market contributor.

Liquid nitrogen (LN) is a dry, condensed, scentless, inert and non-combustible cryogenic liquid used for rapid freezing. It is produced in air separation and liquefaction plants through cryogenic distillation and pressure swing adsorption processes and is usually stored in LN dewars, cryogenic liquid cylinders and cryogenic tanks. LN aids in rapid cooling and temporary shrinking of mechanical gears and components during machine assembly for improved intrusion fits. It is also used for cryosurgeries, cryotherapies and cryopreservation procedures to remove decayed tissues, warts, moles, skin tags and pre-cancerous cells in the body. LN also finds extensive applications for the freezing of food and beverages and creating an aesthetic cloud of vapor or fog over dishes in fine-dine restaurants, cafes and hotels.

Liquid Nitrogen Market Trends:

The increasing demand for cryogenic liquids for metal fabrication and manufacturing of electronics, healthcare, automotive and lighting systems is one of the key factors driving the market growth. LN is widely used as a coolant to prevent additional heat generation during the grinding process resulting in minimal corrosion and high-quality and uniformly sized ice particles. Moreover, the widespread adoption of LN as an organic additive for the development of generics, therapeutic medicines and active pharmaceutical

ingredients is providing a thrust to the market growth. In line with this, significant growth in the food and beverage industry is also favoring the market growth. LN is widely used for rapid cooling freezing of bakery products, meat, poultry, fish, prepared meals, vegetables and fruits while retaining their original color, scent and flavor. Other factors, including rapid industrialization, along with the launch of innovative LN-compatible automobile engines for minimal carbon emissions, are anticipated to drive the market toward growth.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global liquid nitrogen market, along with forecasts at the global, regional and country level from 2022-2027. Our report has categorized the market based on technology, function, storage type and end-user.

Breakup by Technology:

- Cryogenic Distillation
- Pressure Swing Adsorption
- Others

Breakup by Function:

- Coolant
- Refrigerant

Breakup by Storage Type:

- Cylinders and Packaged Gas
- Merchant Liquid/Bulk
- Tonnage
- Others

Breakup by End User:

- Chemicals and Pharmaceuticals
- Food and Beverage
- Healthcare
- Metal Manufacturing and Construction
- Rubber and Plastic

Others

Breakup by Region:

North America

United States

Canada

Asia-Pacific

China

Japan

India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

Others

Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being Air Liquide S.A., Air Products and Chemicals Inc., AMCS Corporation, Asia Industrial Gases Pte. Ltd., Cryomech Inc., Gulf Cryo, Linde plc, Messer Group GmbH, Statebourne Cryogenics Ltd and Taiyo Nippon Sanso Corporation (Mitsubishi Chemical Holdings Corporation). Key Questions Answered in This Report:

How has the global liquid nitrogen market performed so far and how will it perform in the coming years?

What has been the impact of COVID-19 on the global liquid nitrogen market?

What are the key regional markets?

What is the breakup of the market based on the technology?

What is the breakup of the market based on the function?

What is the breakup of the market based on the storage type?

What is the breakup of the market based on the end user?

What are the various stages in the value chain of the industry?

What are the key driving factors and challenges in the industry?

What is the structure of the global liquid nitrogen market and who are the key players?

What is the degree of competition in the industry?

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