

# Global Sodium Borohydride Market: Size, Trends, Forecasts

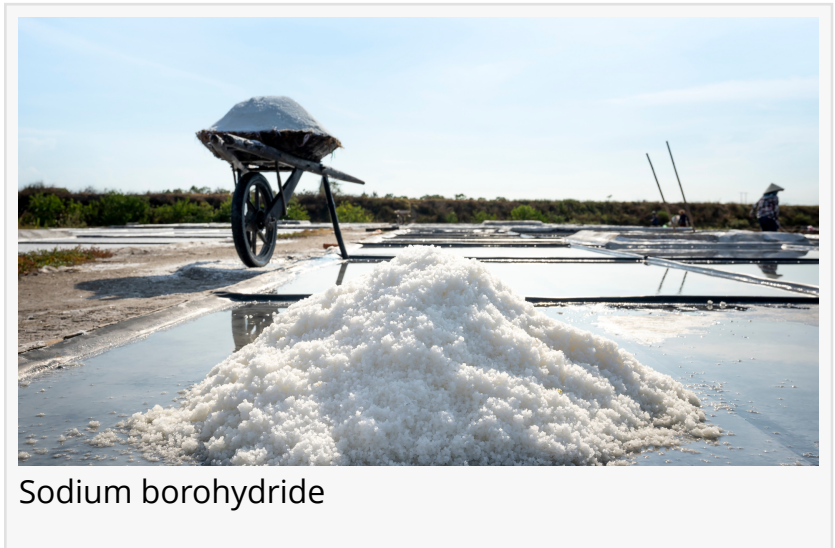
*The sodium borohydride market has grown significantly over the past years, which covers the key segments, trends, and competitive dynamics that influence it.*

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/EINPresswire.com/ -- The Size and Scope of the [Sodium Borohydride Market](#)

The sodium borohydride market has grown significantly over the past years.

This growth comprehensively examines

the market's key segments, drivers, restraints, trends, and competitive dynamics that influence it.



Sodium borohydride

## Sodium Borohydride Market Report

Sodium borohydride ( $\text{NaBH}_4$ ) is an important inorganic hydride with various applications. It is white in color, odorless, and a combustible solid. Sodium borohydride is a reducing agent for synthesizing organic compounds, such as amines and alcohols.

The Covid-19 pandemic and the ongoing conflict between Russia and Ukraine have significantly impacted the global market. With many countries experiencing significant economic downturns, demand for this compound has decreased drastically since early 2020. This is due to its wide array of uses in pharmaceuticals, printing chemicals, fuel cells, and research laboratories worldwide.

With the world's population growing rapidly and the demand for energy resources and technology developments increasing, the need for alternative clean energy sources is becoming increasingly important.

This makes sodium borohydride an attractive option as it can provide a reliable and cost-effective power source that is also environmentally friendly.

According to PR Newswire's market research, the Global Sodium Borohydride Market is expected to be worth USD 2,849.19 million by 2030, with a CAGR of 7.49% from 2021 to 2030.

Factors such as its inexpensiveness and high hydrogen density make it attractive as a hydrogen storage medium.

### COVID-19 Impact on Global Market

In the face of a turbulent 2020, COVID-19 has caused massive disruptions in chemical markets, including sodium borohydride. Production scales have taken a hit due to plant closures across China and the U.S. Still, with government initiatives and upgraded safety regulations by businesses providing worker protection from pandemics like COVID-19 – many are optimistic that this market will rebound stronger than ever before.

### Sodium Borohydride Uses

#### 1. As a Reducing Agent

Sodium borohydride is an incredibly effective reducing agent. It can convert aldehydes and ketones into alcohol. It can even be used in the second phase of the oxymercuration procedure, which involves converting mercury from the C-Hg bond into a C-H bond with NaBH<sub>4</sub>.

This incredible compound can reduce a wide range of organic carbonyls depending on the circumstances. Using methanol as a solvent system facilitates hydrolysis throughout NaBH<sub>4</sub> reduction. Water is used in the second phase of the lithium aluminum hydride reduction process.

#### 2. As a Bleaching Agent

Sodium borohydride is a powerful chemical used in paper mills. It is an excellent bleaching agent and aids in paper stability, making it a favored choice for many applications, including newsprint, tissues, telephone directories, and packaging.

KemBorino, an alkaline solution containing 12% sodium borohydride and 40% sodium hydroxide, has become increasingly popular due to its effectiveness in generating sodium dithionite for mechanical pulp bleaching.

### Market Opportunities

Sodium borohydride is an attractive option for hydrogen storage and can be used as fuel for fuel cells. It has already been studied to understand the behavior of hydrogen at different pressures and temperatures.

Through processes involving NaBH<sub>4</sub>, it is possible to store hydrogen in the form of NaBO<sub>2</sub>, which is created as a byproduct of the hydrolysis of NaBH<sub>4</sub>. This provides an easy mechanism for storing and releasing hydrogen, making it an ideal source for low-carbon energy applications such as home heating systems and hydrogen-powered cars.

Due to the high hydrogen storage capability (more than 10.8% by weight based on the hydration coefficient), NaBH<sub>4</sub> is a well-known hydrogen source. As a result, its rising use as a hydrogen-storing agent is expected to drive market growth.

### Global Sodium Borohydride Market Advancements

1. Integrating chemical and electrochemical reduction through coal water slurry desulfurization is a recent development that protects our environment and public health. Along with lowering the levels of hazardous gases like SO<sub>2</sub>, SPM (sulfate particulate matter), and other pollutants, it also effectively lowers the corrosion rate of engines and increases their life expectancy.

2. The process of manufacturing sodium borohydride using borosilicate glass is a novel approach that has the potential to revolutionize hydrogen storage. This entails converting borosilicate glass, quartz powder SiO<sub>2</sub>, and metallic sodium under high pressure – up to 22 atmosphere – while maintaining temperatures between 400 and 500 degrees Celsius.

### Market Segmentation

#### 1. Based on Type:

The global market is divided into four types: powder, granules, solution, and pellets. The granule-type segment is expected to have a significant market share due to its increasing use in various industries as a mild reducing agent.

#### 2. Based on Purity:

The market is divided into below 98% purity and above 98% purity. Because of the widespread use of the purity type in drug research and development, above 98% purity is expected to hold a significant market share in the coming years. The purity level is widely used in drug advancements and inventions in fuel cells.

#### 3. Based on Applications:

On this basis, the market is divided into applications such as pulp and paper, pharmaceutical drugs, fuel cells, metal reduction, and others. The pulp and paper segment will likely lead the market for increasing use as a bleaching agent in various pulp and paper applications.

#### 4. Based on Regions:

On this basis, the market is divided into five regions: North America (US, Canada, Mexico), Latin America (Brazil, Argentina), Europe (Germany, France, UK, Spain, Italy, and Others), Asia Pacific (China, India, Japan, South Korea, Others), and the Middle East and Africa (Saudi Arabia, UAE, South Africa, Others).

The Asia Pacific market held a significant market share in 2021 and is expected to grow at a high CAGR during the forecast period, owing to the region's increasing adoption of NaBH<sub>4</sub> all over industries. People experiencing polycystic ovarian syndrome, digestive problems, and lifestyle-related ailments will significantly boost their demand in the form of NaBH<sub>4</sub> supplements.

Other countries' markets are also expected to experience high growth due to its adoption in the pharmaceutical sector and pulp & paper manufacturing industry.

#### Market Competitors

Leading players in the global NaBH<sub>4</sub> market are American Elements, Ascensus, Vertellus, SinSon Pharma Limited, Spectrum Chemical, Merck KGaA, Midas Pharma GmbH, SHILPA CHEMSPEC INTERNATIONAL PRIVATE LIMITED, Tokyo Chemical Industry Co. Ltd. (TCI), Montgomery Chemicals LLC, Spectrum Chemical, Merck KGaA, and Jiangsu Huachang Chemical Co. Ltd.

Brendan McMahon

BORATES TODAY

editor@borates.today

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