

Desalination Chemicals Market Forecasts to 2032 – Global Analysis By Type of Chemical (Scale Inhibitors, Antifoam Agents, pH Adjusters Agents and Pre-treatment Chemicals), Desalination Process, Source of Water, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Desalination Chemicals Market is accounted for \$2.9 billion in 2025 and is expected to reach \$5.5 billion by 2032 growing at a CAGR of 9.2% during the forecast period. Desalination chemicals are specialised materials used in the desalination process to cleanse and purify brackish or saltwater so that it can be used in industry or for human consumption. These substances, which assist stop scale development, regulate microbial growth, and improve filtration performance, include antiscalants, coagulants, flocculants, biocides, and pH adjusters. By lowering fouling, corrosion, and scaling in membranes and equipment, they are essential to preserving the efficiency and lifespan of desalination facilities.

Market Dynamics:

Driver:

Rising global water scarcity

The demand for alternate water sources has increased as a result of population growth, industrialisation, and climate change, which are placing growing strain on freshwater resources. A dependable option is desalination, particularly in coastal and arid areas with scarce freshwater supplies. Chemicals like coagulants, biocides, and antiscalants are necessary to guarantee the longevity and effectiveness of desalination plants. The need for chemicals is being further fuelled by significant investments made by both the

public and commercial sectors in desalination infrastructure. The global market for desalination chemicals is therefore directly benefiting from the growing need for clean water.

Restraint:

High capital and operational costs

Advanced technology and a significant infrastructure investment are needed to set up desalination facilities. Operational costs are also raised by continuing expenditures for skilled labour, maintenance, and energy. Desalination is less economically feasible because to these high expenses, particularly in developing nations with tight budgets. As a result, prospective purchasers might look for less expensive alternatives for water purification. The global adoption of desalination chemicals is slowed down and market expansion is restricted by this costly hurdle.

Opportunity:

Development of eco-friendly chemicals

The environmental impact of desalination processes is lessened by these sustainable options. The need for more environmentally friendly solutions has increased as worldwide regulations governing chemical use and wastewater disposal become more stringent. Eco-friendly chemicals guarantee adherence to environmental regulations while increasing operating efficiency. By supporting international environmental objectives, they also improve the public's opinion of desalination projects. As a result, the market is expanding as more businesses and local governments use these chemicals.

Threat:

Competition from alternative water sources

Lower operating costs are driving the adoption of technologies including water conservation, rainfall harvesting, and wastewater recycling. When compared to desalination, these options are frequently more ecologically friendly and energy-efficient. The need for desalination and related chemicals is decreasing as governments and businesses invest in these alternatives. Additionally, areas with better infrastructure that provides access to a lot of freshwater require less desalination that uses a lot of

chemicals. This change restricts the market expansion prospects for producers of desalination chemicals.

Covid-19 Impact

The COVID-19 pandemic disrupted the desalination chemicals market due to global supply chain interruptions, reduced industrial operations, and delayed infrastructure projects. Lockdowns and travel restrictions hindered production and transportation of key chemicals, causing temporary shortages and price fluctuations. However, the market showed resilience as demand for clean water remained critical, especially in healthcare and municipal sectors. Post-pandemic recovery saw renewed investments in desalination projects, driving gradual market stabilization and growth, particularly in water-scarce regions reliant on desalination technologies.

The scale inhibitors segment is expected to be the largest during the forecast period

The scale inhibitors segment is expected to account for the largest market share during the forecast period by preventing mineral scale buildup in membranes and equipment, ensuring efficient operation. These chemicals enhance the longevity and performance of desalination systems, reducing maintenance costs and downtime. With rising demand for freshwater, especially in arid regions, the use of scale inhibitors becomes increasingly critical. Technological advancements in inhibitor formulations further boost their effectiveness and adoption. As a result, this segment plays a vital role in supporting the global expansion of desalination infrastructure.

The bottled water manufacturers segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the bottled water manufacturers segment is predicted to witness the highest growth rate, due to its high demand for purified water. These manufacturers often rely on desalination processes to secure clean water sources, especially in regions with limited freshwater availability. Desalination chemicals are essential in treating and maintaining water quality during this process, ensuring safety and regulatory compliance. As the global consumption of bottled water continues to rise, the need for efficient desalination systems and chemicals also increases. This growing demand ultimately supports the expansion of the desalination chemicals market.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share due to rising water scarcity and increasing industrialization across coastal regions. Countries like China, India, and Australia are investing heavily in desalination plants to meet freshwater demands, driving the need for pre-treatment and post-treatment chemicals such as antiscalants, biocides, and coagulants. Technological advancements in membrane-based desalination and government support for sustainable water solutions further fuel market expansion. Additionally, growing environmental concerns are pushing the adoption of eco-friendly chemicals, creating new opportunities for regional and international players in the sector.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, owing to increasing demand for freshwater amid rising water scarcity and industrialization. Key sectors driving this demand include power generation, oil & gas, and municipal water treatment. The U.S. and Mexico are leading contributors, with investments in advanced desalination technologies and infrastructure upgrades. Corrosion inhibitors, scale inhibitors, and antifoaming agents are commonly used chemicals to ensure efficient operation of desalination plants. Growing environmental concerns and regulatory support for sustainable water solutions further fuel market expansion in the region.

Key players in the market

Some of the key players profiled in the Desalination Chemicals Market include SUEZ Water Technologies & Solutions, Ecolab Inc., Kemira Oyj, BASF SE, DuPont Water Solutions, Solenis LLC, General Electric Company, Dow Chemical Company, LANXESS AG, Toray Industries Inc., Avista Technologies, Inc., Italmatch Chemicals S.p.A., H2O Innovation Inc., Kurita Water Industries Ltd., Genesys International Ltd., SNF Floerger and Veolia Environnement S.A.

Key Developments:

In October 2024, Ecolab partnered with Digital Realty to pilot an AI-powered water conservation solution across 35 U.S. data centers. Implemented by Nalco Water, this initiative aims to enhance water use efficiency and minimize environmental impact, showcasing Ecolab's commitment to innovative water management solutions relevant to desalination operations.

In September 2024, SUEZ entered into a Memorandum of Understanding with Abu Dhabi National Energy Company (TAQA) and Siemens to participate in the Mohamed bin Zayed Water Initiative. This global competition aims to develop breakthrough desalination technologies that are both sustainable and affordable for emerging countries.

In April 2023, SUEZ partnered with Wanhua Chemical Group and China Railway Shanghai Engineering Bureau Group (CRSH) to initiate a seawater desalination project tailored for industrial applications in China. This collaboration was formalized during President Emmanuel Macron's official visit to China, emphasizing the strategic importance of the project.

Type of Chemicals Covered:

Scale Inhibitors

Antifoam Agents

pH Adjusters Agents

Pre-treatment Chemicals

Biocides and Disinfectants

Coagulants and Flocculants

Corrosion Inhibitors

Membrane Cleaners

Oxygen Scavengers

Other Type of Chemicals

Desalination Processes Covered:

Thermal Desalination

Membrane Desalination

Source of Waters Covered:

Seawater Desalination

Brackish Water Desalination

River Water Desalination

Wastewater Desalination

Other Source of Waters

Applications Covered:

Municipal

Industrial

Agricultural

Marine

Other Applications

End Users Covered:

Hospitality Sector

Military & Defense Installations

Real Estate

Bottled Water Manufacturers

Mining Operations

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments

- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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