

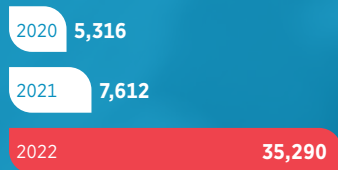
Soda ash, chromium and Oxyvit exports to more than 100 countries

ŞİŞECAM CHEMICALS NET SALES REVENUES

TRY **35.3**
Billion

World's 2nd Largest
Soda Ash Producer
World's Leading
Manufacturer of Basic
Chromium Sulphate

Şişecam Chemicals Net Sales Revenue (TRY Million)



Şişecam Chemicals recorded net sales revenue of TRY 35,290 million as of year-end 2022.

AN OVERVIEW OF 2022

In the first half of 2022, in the sectors in which Şişecam Chemicals operates, a recovery was experienced due to rebounding demand after the pandemic. Despite the global risks in the second half of 2022, Şişecam maintained its sales stability by adapting to changing market conditions, thanks to its effective strategies, strong financial infrastructure, and efficient distribution channels. Şişecam Chemicals exported soda ash, chrome and Oxyvit products to more than 100 countries in 2022.

Developments in the Soda Ash Sector

The Russian-Ukrainian war, which started in the first quarter of the year, had an impact on the economy and trade worldwide and in Europe in the form of cost increases and supply shortages throughout the year. This situation manifested as disruptions in energy and food supply, increases in commodity, energy, and agricultural product prices, while demand for soda ash products remained strong during this period.

When evaluating 2022 on a sector basis, the flat glass sector began the year with intense soda ash demand, parallel to the strong course of construction and automotive demand. The demand established solar glass production capacities in India and China. Soda demand of customers in the glass packaging industry also maintained its strong course during the year.

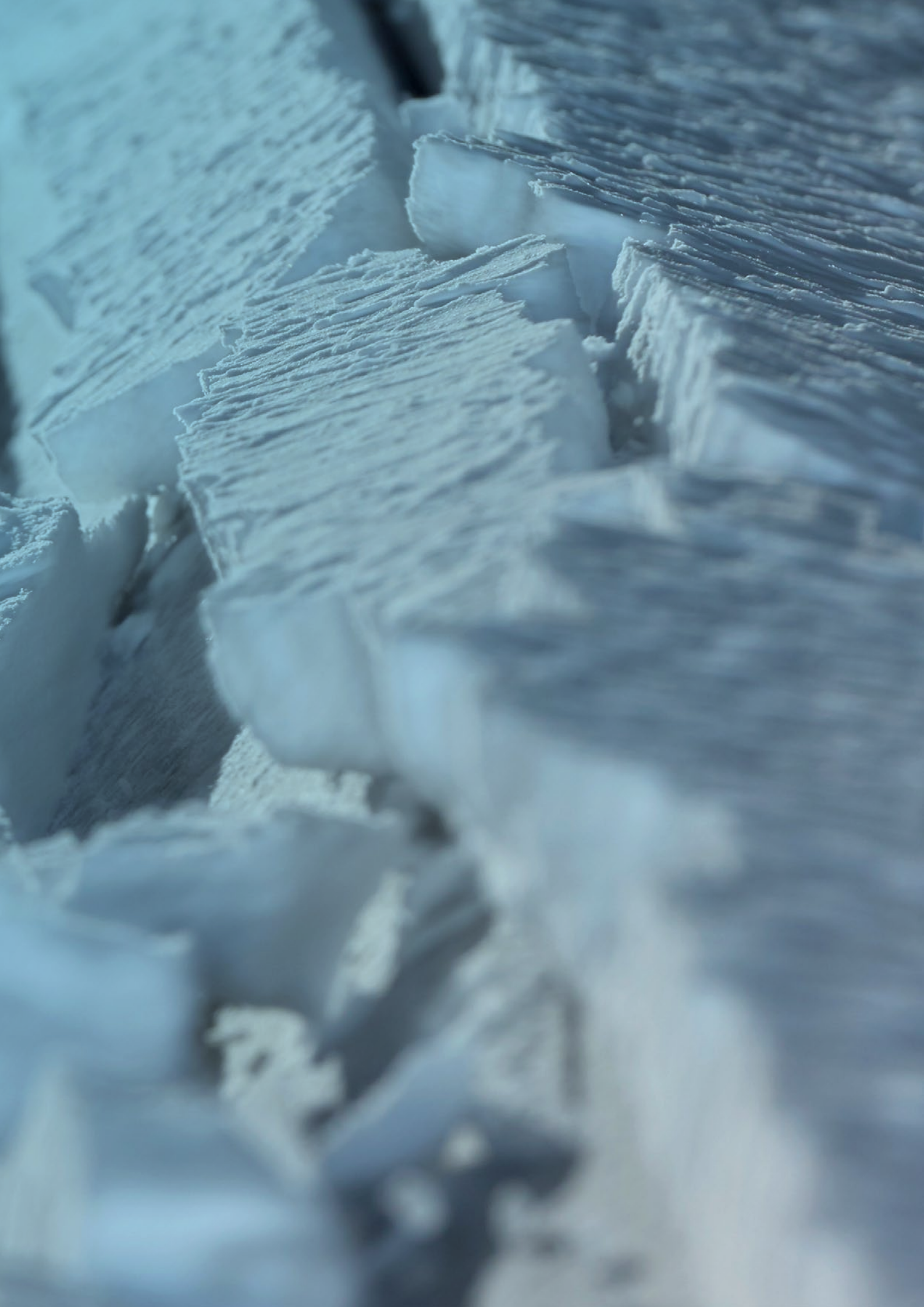
Demand of the detergent sector, where soda ash products are used, maintained its balanced course throughout the year, despite a slight slowdown in demand in the last quarter of the year.

New investments of the lithium sector, especially concentrated in South America, further boosted demand for soda ash.

The increase in global soda ash demand in 2022 was above the level of 2% compared to the previous year.

The reflection of the developments experienced in 2022 showed a similar course in Türkiye as well, as it did on a global scale.

Uncertainties experienced globally from the second quarter, rising energy costs, and supply issues raised product prices. However, despite these increase in the sector continues, especially with the newly developments, the vitality in almost all sectors continued with the impact of exports. Despite the increasing economic uncertainties, the strong demand of exports kept the sectors alive until the third quarter of 2022. Strong demand created a positive impact in demand of the glass, detergent, chemical, and textile industries, where soda ash and sodium bicarbonate are used as inputs. The last quarter of the year witnessed intense competition compared to the third quarter.



Global competitive advantage with high-powered production facilities

Şişecam Chemicals stands out with its abundant supply of raw materials, effective energy management, high production quality, and exceptional operational efficiency.

Developments in the Chromium Chemicals Sector

With the impact of the post-pandemic recovery, the first half of 2022 started with strong demand in Türkiye and global markets. High inflation and a global economic slowdown, which arose especially in the second half of the year, directly affected the leather sector, where basic chromium sulfate is used as the main input, and caused a global demand contraction. Disruptions in the supply of semiconductor microchips during the year caused production halts in the automotive industry. The metal surface finishing and leather production sectors, which serve the automotive and construction sectors, were adversely affected by these halts. Due to the Zero-Covid policies implemented in China, one of the largest markets of the leather industry, many leather manufacturers shut down. This situation adversely affected the local manufacturers in different countries that provide input to leather production in China, as well as sales to China. Despite the negative developments experienced, Şişecam's sales revenues for chrome chemicals increased during the year.

ACHIEVEMENTS IN 2022

In 2022, the energy supply problem, increasing production and raw material costs, and high inflation also affected the sectors that use soda products as input and caused demand fluctuations. Managing risks and opportunities correctly in changing market conditions and formulating its strategies in line with current competitive conditions, Şişecam delivered 4.9 million tons of soda ash produced at four facilities located in Türkiye, Europe, and the United States to more than 200 customers in 83 countries. In a challenging global trade environment, service quality was prioritized in line with Şişecam's customer satisfaction-oriented service approach. Despite the variable market conditions throughout the year, the desired targets were achieved with adaptive strategies, long-term customer relationships, and agile feedback.



Compared to international competitors, Şişecam Chemicals' soda ash production facilities are differentiated with their abundant supply of raw materials, effective energy management, high production quality and exceptional operational efficiency. The close proximity of the Mersin Plant to a shipping hub ensures that logistics costs are lower than other producers that sell to overseas markets. As a result, Şişecam Chemicals can readily export to a large part of the world. Providing a clear logistical advantage with its location near strategic customers, the Bosnia & Herzegovina Plant efficiently serves Europe, the largest soda market after China.

Şişecam Chemicals benefits from synergy with production facilities in different locations. Şişecam Chemicals has the capability to offer diversified supply options. This configuration ensures an uninterrupted supply by protecting Şişecam Chemicals from potential Political and environmental risks. As a result, Şişecam Chemicals is preferred by corporate soda ash customers around the world. With the inclusion of the USA facility in this structure, Şişecam further expanded its influence and brand awareness around the world in the field of soda ash.



Şişecam became one of the two biggest players in the world in the field of soda ash, with its Wyoming facility investment in the USA at the end of 2021. Creating a competitive advantage in accessing low-cost natural soda ash in the soda market, which is intensely competitive, Şişecam has strengthened its power in the global soda market.

As a result of the direct impacts of high inflation and global recession in the leather sector, where basic chromium sulfate product is used as the main input, global chrome demand contracted. In addition to negative developments such as rising production and energy costs, although the Covid quarantine practices in China, one of the largest markets of the leather industry, adversely affected sales to China, Şişecam managed to increase its sales revenues compared to the previous year by focusing on markets with significant consumption volumes.

Negative economic developments, challenging trade conditions, the contraction in the automotive and construction sectors also affected the metal plating sector, where chromic acid is used as the main input. Şişecam closely followed market developments and increased its sales revenues, mainly in North America and Türkiye, which are among its strategic and major markets.

Şişecam conducts chromium production and sales in Italy, sales in China, and production at the Mersin Kromsan Plant in Türkiye, its main facility in this segment. In 2022, Şişecam generated 84% of its chromium sales revenue from international markets. Şişecam Chemicals Kromsan Plant maintained its pioneering position in its business segment in 2022. The facility boasts advanced production technology, a high-capacity utilization rate, product development activities, continuous high-quality production capability, a widespread sales network, and high environmental standards.

INTERNATIONAL SALES

84%

In 2022, Şişecam generated 84% of its chromium sales revenue from international markets.



Cromital S.p.A., Şişecam Chemicals' subsidiary in Italy, manufactures and sells BCS in liquid and powder form. It is the market leader in Italy, Europe's biggest leather processing center. The company also enjoys a key position in the European market for Chromium III chemicals, a product developed for the metal plating industry, as well as liquid chromic acid and liquid sodium bichromate. Cromital S.p.A. is the only factory in Italy authorized to treat and recover chromium from effluent water generated by the metal plating industry. As a result, the company contributes to environmental protection efforts. The 2022 sales revenues of Cromital S.p.A. in euro terms increased by 55% compared to 2021.

Highlights from 2022 Investments

Conducting its soda ash and chrome chemicals production activities in five countries - Türkiye, USA, Bulgaria, Bosnia & Herzegovina, and Italy - Şişecam is one of the world's three largest producers in the soda ash and chrome activity areas. Ranking fourth globally in chromic acid production, Şişecam is the world leader in basic chromium sulphate production.

In line with its investment and growth strategies, Şişecam has adopted innovative and sustainable approaches in its chemical activities and continues to develop its

infrastructure while maintaining its focus on efficiency and continuous improvement.

In 2021, Şişecam started soda ash production activities in the USA with the acquisition of 60% of the shares held by the Ciner Group in the Wyoming facility it manages in that country. With this investment, Şişecam's annual soda ash production capacity reached 4.9 million tons. The natural soda ash investment, which is carried out jointly with Ciner Group and for which work began in 2019, continued unabated in 2022. After the investment, which includes the establishment of the largest soda ash production facility in a single location, Şişecam's position in global markets will be further strengthened with the cost advantage provided by natural soda ash. With the commissioning of the natural soda ash investment, Şişecam aims to become the world's leading producer of soda ash as its total soda ash production capacity will exceed 10 million tons.

OXYVIT

Oxyvit Kimya - founded jointly with the Italian Cheminvest B.V. in 1996 and wholly acquired in 2017 - produces Vitamin K3 and sodium metabisulfite. As Europe's only Vitamin K3 producer, Oxyvit Kimya is positioned as a major supplier in the world feed industry with this high

value-added product. The products of Oxyvit, whose sodium metabisulfite product is used in the food, mining, textile, and water treatment sectors, are preferred for their high quality.

Oxyvit maintained its strong position in the market in 2022, generating 76% of its sales revenues from global sales to about 100 customers in 31 countries.

Despite the fluctuations experienced by the feed sector throughout the year, with the quality product supply and customer-oriented approach, Vitamin K3 sales revenue increased by 59% compared to the previous year on a USD basis.

The intense competition in sodium metabisulfite continued in 2022 as well. Developments in the market were followed closely, and supportive relations were maintained with business partners. Oxyvit exported approximately 65% of its sodium metabisulfite production.

SIGNIFICANT EVENTS

EuroTier, the International Agriculture and Livestock Fair organized every two years in Germany, was attended by the company. A meeting of Türkiye Authorized Dealers was organized, bringing together the leading business partners of the soda ash, chromium, and Oxyvit business lines.



Solutions to the growing need for raw materials

Project design and economic evaluation studies are ongoing for the acquisition of new mining sites, capacity increases at existing facilities, and new facility investments.

MINING COMPANIES

Mining companies operating to meet the raw material needs of glass, glass fiber and soda factories conduct their business operations as Camiř Madencilik A.ř. in Trkiye, Camiř Egypt Mining Co. in Egypt and R.K. Vijenac d.o.o. in Bosnia & Herzegovina.

Mining companies with a total of 650 employees worldwide meet the raw material needs of řiřecam, and also provide raw materials to a wide range of manufacturers such as glass, ceramics, cement and silicate outside the company. In 2022, over 500 thousand tons of industrial raw materials were sold by Camiř Madencilik to external customers, 51% of which were outside of Trkiye.

Camiř Madencilik has become a reliable raw material supplier for the industry with its product sales to ceramic and glass manufacturers in Europe and the Middle East for more than 10 years. For the feldspar mineral, product qualifications and the policy of sales outside the Group were updated in 2022, giving priority to domestic demand, aiming to extend the life of the resources under the responsibility of the company and ensure the sustainability of raw materials. Additional reserve development studies are underway in order to boost sales outside the Group.

After the merger of the Group companies Camiř Madencilik A.ř. and Madencilik San. ve Tic. A.ř., which was completed in 2021, the transfer procedures of the legal permits of 10 mining sites, which were transferred to Camiř Madencilik A.ř., were also completed in 2022.

The mill revision capacity increase project at the Bilecik Sand Processing Facility, which provides input to the Bursa and Eskiřehir glass packaging and flat glass factories, was completed in 2022. Some of the Camiř Egypt Mining Co. production equipment was transferred to the Bilecik facility and put into use, thus increasing the solar quality sand production capacity at the Bilecik site.

Industrial raw material exports

In 2022, over 500 thousand tons of industrial raw materials were sold by Camiř Madencilik A.ř. to external customers, 51% of which was outside of Trkiye.

In parallel with its development strategy, řiřecam undertakes project design and economic evaluation studies for the acquisition of new mining sites, capacity increases at existing facilities, and new facility investments in the field of mining, with the aim of meeting the growing need for raw materials.

In 2022, the Karabk quartzite, Aydın feldspar and Balıkesir kaolin fields were explored for reserve development. In addition, research, sampling, and R&D studies were carried out for alternative raw material sources and quality optimization for existing reserves for řiřecam glass factories operating in Russia, Georgia, Hungary, and Italy. The company evaluated expansion opportunities for its mineral reserve portfolio by conducting investigation-feasibility processes for potential mining sites in Trkiye that were put out to tender by the General Directorate of Mining and Petroleum Affairs (MAPEG) or owned by individuals; one site was included in the company's portfolio through the MAPEG tender during the year.

řİřECAM ELYAF

In early 2019, řiřecam Elyaf commissioned its glass fiber plant equipped with state-of-the-art technologies. The facility was assessed by the Ministry of Economy, General Directorate of Incentive Implementation and Foreign Investment as a 'Strategic Investment,' and aims to grow in parallel with the developing composite industry.

řiřecam Elyaf manufactures the main inputs for the composite industry, including mats, multi-end roving, single end roving, and chopped strands. A wide range of business sectors are supplied for use in wind turbine blades, interior/exterior automotive parts, engineering plastics, marine products, industrial applications and construction.

The company adapted to the changes in the supply/demand balance in 2021 and took actions to protect business relations in focus markets. The supply/demand imbalance, which continued in 2022, was managed with strong collaborations in the focus markets. Sales volumes were adversely affected due to the contraction of the global market in the last quarter of the year and the drop in freight prices for imported competitor products to pre-pandemic levels.



In Trkiye, on the other hand, anti-dumping implementation for Chinese origin products continues to protect the local manufacturer and the industry. As of 2022, the continuation of the implementation was ensured.

Developments in the wind energy sector in Trkiye and target European markets were monitored during the year. Business relationships have been established with industry leading companies. Demands in this strategically important sector are expected to increase compared to other sectors.

Concurrent to its ongoing marketing activities, řiřecam Elyaf also accelerated its international certification efforts with the aim of being recognized and included in customer supplier portfolios. Aiming to satisfy the needs of target industries in Trkiye and globally, řiřecam fiber products hold DNV-GL, Lloyds Register, FDA (USA), FC (EU 10/2011), KTW and ACS certifications, all of which are internationally recognized.



Şişecam Elyaf conducts R&D activities in line with its strategic targets and objectives. R&D efforts are focused on improving existing processes, boosting efficiency and developing high-performance products. To this end, various R&D activities are underway to expand the portfolio with new products by reviewing glass composition, process conditions and final product performance. In parallel with the changing expectations for new products within the current dynamic structure of the composites industry, efforts to expand the existing product portfolio were also accelerated.

In the automotive industry, light vehicle production has gained importance in line with the zero-carbon emission target. For this reason, the use of glass fiber and other composite materials is increasing, taking share from substitute materials.

Şişecam Elyaf maintained its membership with the "Turkish Composite Industrialists Association" and the "Association of Energy Industrialists and Businessmen" in 2022. Additionally, the company also joined the Turkish Wind Energy Association as a Member.

EXPECTATIONS AND OBJECTIVES FOR 2023

In 2023, growth in soda ash demand is expected to be in the 2-3% range. Cautious purchases continue in the market, where there is concern that purchasing power will decrease in parallel with the rise in inflation. Despite this situation, demand is expected to remain strong in 2023, especially in the glass packaging and solar glass sectors.

Strong, sustainable market position

By minimizing the impacts of expected supply-demand and energy cost volatility in global markets. Şişecam ensures that its strong market position remains sustainable.

Şişecam makes its strong position sustainable by minimizing the impacts of expected supply-demand and energy cost volatility in global markets thanks to its production facilities in diverse geographic regions and their diversified production structures.

Şişecam continues to expand its global market position with its sales to external stakeholders, as well as ensuring continuity in the supply of raw materials for companies within the group, mainly with soda products, which it produces in the field of chemicals.

The aim is to keep the sector-leading position by maintaining the effectiveness in strategic markets with close monitoring of supply/demand balances coupled with production optimization in chromium chemicals. Chromium chemicals activities are carried out in a way that provides widespread penetration and marginal benefit thanks to the effective global sales network. This strategy will continue to be the main focus in 2023. With the end of the Zero-Covid policy of the People's Republic of China, increasing the sales volume in the country has become one of the main targets.

Thanks to the advantage of Cromital S.p.A.'s location, it set the main goal of further boosting its sales volumes in liquid chromium chemicals in the European market, which has increased regularly over the last three years, in 2023.

Oxyvit Kimya aims to increase its new market penetration by maintaining its global position with the strategy of protecting and diversifying its customer portfolio in global markets, especially in Türkiye and Europe, with Vitamin K3 and sodium metabisulfite products.

Camiş Madencilik will continue its efforts to meet the necessary capacity increase and investment needs of Şişecam glass and glass fiber factories in line with the expanding need for raw materials, as well as to explore new fields and develop reserves in existing fields. With the diversification of the value-added product range, the aim is to maintain and increase sales by offering minerals of various qualities to relevant industries.



The environment of uncertainty that emerged as a result of the pandemic and political tensions revealed the importance of being prepared for possible global supply disruptions. In line with this requirement, our investments to strengthen our raw material production sustainability will continue.

In 2021, as a continuation of the Yalıköy Restructuring Project, which was commissioned to eliminate the need for imported sand of Glass Packaging's Eskişehir and Yenişehir plants, the construction of the new product silo group started in 2022 and is targeted to be completed in 2023.



In addition, the investment projection includes expanding the production capacity of the Karabük sand preparation facility, which was commissioned in 2013 to boost the raw material quality levels of Eskişehir, Yenişehir, and Trakya plants and to enhance the raw material supply security.

Thanks to the related investments, raw material sustainability will remain strong in line with the production increase and targeted quality envisaged by the glass plants.

In line with Şişecam's project of commissioning a glass packaging factory in Hungary, research and technical studies for potential suppliers and mine areas for the raw material needs of the factory will be continued. In order to meet the raw material needs of Şişecam's glass factories in the Russian Federation in the long term and in a sustainable way, the existing resources will continue to be examined, and technical studies will be maintained to include new resources in the portfolio.

In the last quarter of 2022, there was a contraction due to global recession. In 2023, in response to this contraction, which is expected to continue, Şişecam is taking action for the countries and customers in its global portfolio and aims for customer diversification. Şişecam also aims to minimize this negative impact by increasing its effectiveness in the renewable energy sector, which is of strategic importance, and with value-added products whose development processes were completed.