



Overview of the South Korean glass industry

While vibrant construction and automotive sectors have contributed to the growth of South Korea's flat glass industry, a high per capita consumption of beverages (both alcoholic and non-alcoholic) and a burgeoning cosmetics industry has propelled the growth of country's container glass industry, explains Sunder Singh.

Catered for by two large scale flat glass and four mid and small-sized container glass producers, the South Korean glass industry has been through a number of churns in the past two years.

Saint Gobain's divestment from Hankuk Glass Industries, KCC Glass' spin-off from parent company KCC Corporation in the flat glass sector, and the acquisition of cosmetics glass producer Pacific Glass by leading European container glass producer Verescence have been some of the key developments in the country's glass industry during the last 24 months.

Company	Segment	Plant location	Installed capacity
Techpack Solutions	Container glass	Gunsan	260,000 tonnes per annum
Samkwang Glass	Container glass	Nosan and Cheonan	600 tonnes per day
Kumbi Corporation	Container glass	Icheon and Onyang	450 tonnes per day
Pacific Glas	Container glass	Jhanghang	80 tonnes per day
KCC Glass	Flat glass	Yeosu	3,700 tonnes per day
Hankuk Glass	Flat glass	Gunsan and Busan	2,240 tonnes per day

Flat and container glass producers in South Korea

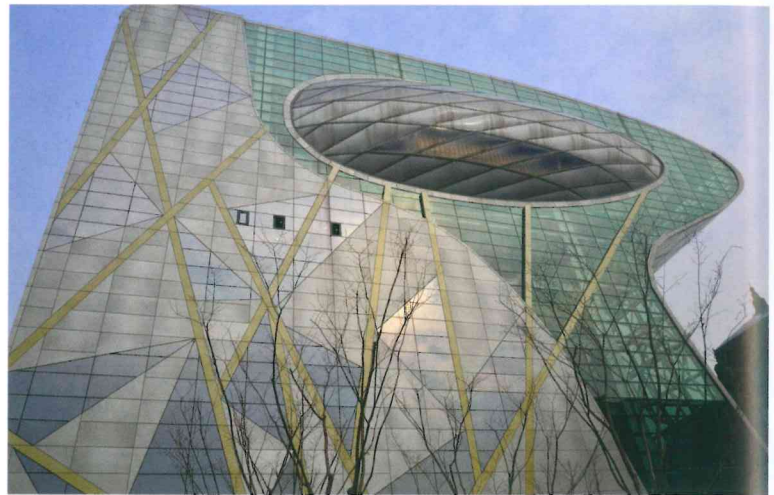
Encouraging numbers from the economic side are expected to result in healthy gains for South Korea's glass producers. Asia's fourth-largest economy is expected to have a GDP growth rate of 4.0% for 2021, a sharp rebound after the economy shrank 1.0% in 2020 – its first contraction in over two decades, according to the news agency Reuters. But growth is expected to ease to 3.0% in 2022 and then to 2.6% in 2023.

Flat glass

Comprising of two float glass producers – KCC Glass and Hankuk Glass – the South Korean float glass industry has registered steady growth rates during the past few years. Cumulatively, the two float glass producers have an installed capacity of 5,940tpd of float glass. Domestic production meets about 80% of the total flat glass demand in the country; the rest is imported from South East Asian countries and China. Both the major sub-segments – architectural and automotive – have contributed to this growth.

Architectural Glass

Steady growth in the construction sector has been the mainstay of the South Korean architectural glass industry. In 2020, the South Korean construction industry, including public and private infrastructure and civil engineering services, recorded double-digit growth of 16.9%. The industry-generated revenue reached \$164 billion (KRW194 trillion) despite the Covid-19 pandemic. The Construction Association of Korea (CAK) predicted that the number of strong construction orders in 2021 will stimulate the economy. According to the Government, it is the first time in history that the Korean construction market has exceeded \$142 billion (KRW166 trillion).



Steady growth in the construction sector has been the mainstay of the South Korean architectural glass industry.

Automotive Glass

The automotive sector is a big contributor to flat glass consumption in South Korea. The country's automobile industry is now the fifth largest producer of passenger cars in the world. The automobile industry accounts for 13% of manufacturing output, generates 12% of value added, and is a very important industrial area that contributes to about 12% of total employment in South Korea.

The last three years have not been best of the times for South Korean automotive producers. In 2020 production was deeply impacted by Covid 19 and South Korea's domestic auto production fell 11% to 3.5 million vehicles, with a historic drop in exports. However, total South Korean car output for 2021 is expected to increase by 4.4% to 3.66 million units.

Final figures for 2021 sales at home are projected to fall by 3.5% to around 1.84 million units due to production disruption from chip shortage. According to the Korean Automobile Manufacturers Association, sales of domestic cars are projected to drop 5.8% to 1.51 million units due to lacklustre new releases amid chip shortage. Auto exports are expected to climb by 14% to 2.15

million units on a sign of recovery in major markets such as the US and European Union, and emerging markets.

From January to July 2021, the number of cars produced from South Korea amounted to 2.11 million units, up 7.0% from a year earlier. Outbound shipments soared 23.1% to 1.24 million units, while domestic sales fell 3.2% to 1.06 million units.

Despite the decline of the last three years, automotive glass is expected to remain an important factor in the growth of South Korea's flat glass industry.

KCC Glass

KCC Glass is the largest flat glass producer in South Korea. A subsidiary of KCC Corporation, which was spun off from the parent company in January 2020 to ensure stable supply and demand of glass and developing high-performance glasses including head-up display (HUD) glass, lightweight laminated glass, solar cell roof and heating glass, KCC Glass has an installed capacity to produce 3,700 tonnes of float glass through five float glass lines.

The last capacity expansion in 2018, when KCC Glass commenced ▶

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production from a double width line specifically for automotive grade glass took the overall installed capacity of the company to 3,700tpd. Three years prior to this line, the company installed one of the largest float glass lines in the Asian Pacific region, with an installed capacity to produce 1,200 tonnes of float glass.

The company also has capability to produce approximately 17 million square metres of coated glass per year through two lines.

In December 2020, KCC Glass merged with Korea Autoglass Corp – producer of automotive glass for domestic and export markets. The automotive safety glass division accounted for about 90% of South Korea's total sales in 2020. It is a major supplier to domestic automakers such as Hyundai Motor, Kia Motors, and GM, while maintaining 70% of the market share through exports.

Speaking at the time of merger, Korea Autoglass CEO Woo Jong-chul said, "The merger will bolster efficiency and strengthen overall competitiveness by solidifying the process of producing architectural and automotive glass under a single roof. By working

together, more effort can be made in research and development that can further lead to growth."

KCC Glass's parent company KCC Corporation is one of the largest business conglomerates in South Korea. Established in 1958, KCC Corporation has led the national construction industry by supplying architectural and industrial materials. KCC Corporation is owned by chairman and CEO Chung Mong-Jin and his family. Mr Mong-Jin is the nephew of the late Hyundai Group founder Chung Ju-young.

Hankuk Glass Industries

Established in 1957, Hankuk Glass solely led the South Korean flat glass market until KCC entered the flat glass arena in 1987. A subsidiary of Saint Gobain until 2019, Hankuk Glass is the smaller of the two flat glass producers in South Korea.

The company operates a total of four float glass lines at two locations: Gunsan and Busan in South Korea. The Gunsan facility houses three state-of-the-art float-glass production lines, while the Busan plant operates one float glass line and one patterned-glass production line. These four float

lines have a total installed capacity of 2,240tpd.

The company's automotive glass division, Hankuk Sekurit Limited was first the automotive glass producer in the country when it commenced operations in 1970. A large automotive production base has enabled it to supply some of the major automotive producers in the country. Hankuk Sekurit currently operates two plants at Gajwa and Iksan and has an annual installed capacity to produce 2.3 million car sets.

Hankuk Processed Glass Industry Co, Ltd. (formerly Hankuk Pair Glass Industry Co., Ltd.), another subsidiary of Hankuk Glass produces added-value glass products such as insulating, reflective, tempered and specialty glasses.

In December 2019, Korea Glass Holdings Co., Ltd., an SPC (segregated portfolio company) established by Korean private equity firm Glenwood PE acquired a 100% stake in Hankuk Glass Industries, Inc. for approximately KRW 330 billion (about 240 million euros), from Saint-Gobain Korea Holdings Co., Ltd.

Container glass

South Korean demand for container glass was estimated at 654,000¹ tonnes at the end of 2019. Catered for by four producers, the country's container glass industry is among the most modern on the Asian continent.

Alcoholic beverages (beer, soju and hard spirits) have been the largest contributors to the growth of the South Korean container glass industry. With a current per capita consumption of over 39 litres, the country's beer industry has been one of the pillars for the growth for container glass. In 2019, South Korea was the 18th largest consumer of beer globally, with a total consumption of 20.22 million ▶

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hectolitres of beer. In the same year, beer accounted for nearly 40% of the total alcoholic beverage sales in the country.

Soju (a clear distilled liquor made from rice, barley or wheat) is the second most popular alcoholic beverage and the second largest demand driver for the South Korean container glass industry. Dominated by the company Hite Jinro, the South Korean soju industry has made rapid progress in domestic and export markets during the last decade. In 2020, Hite Jinro sold around 95.3 million soju cases, almost threefold the amount sold by the world's No. 2 distilled spirit brand, the Philippines' Ginebra, which sold around 31.2 million cases during the same period. This is a stunning performance considering that the global distilled spirits market has been sluggish due to the global pandemic which led alcohol consumption to drop by 9% in 2020 compared to the previous year. Despite the downward trend, Jinro soju logged a 10% growth in sales volume in 2020 compared to the previous year.

Techpack Solutions

With an installed capacity of 260,000 tonnes per year, Techpack Solutions is the largest container glass producer in South Korea. The company operates four furnaces and supplies container glass to leading beverage producers such as OB Beer, The Coca-Cola Company, Woongjin Foods and Lotte Chilsung.

Techpack Solutions has been operating in container glass industry since 1956. It diversified into alternate forms of packaging such as PET and metal cans in the late 1980s. In 2014, leading business conglomerate in South Korea, Dongwon Systems acquired a 56% stake in Techpack Solutions for US \$243 million (250 billion won). Dongwon Group company Star Kist and a private equity firm EQ Partners hold 24% and 20% stakes in the company.

In 2020, Techpack Solutions signed a contract with industrial gas supplier Air Products to convert its third furnace from air-fuel to oxy-fuel for enhanced sustainability and competitiveness.

"With Air Products' support, we have successfully converted two furnaces from air-fuel to oxy-fuel combustion and achieved remarkable improvements in NOx emission reductions, energy efficiency and

productivity. We are confident in Air Products' innovative technologies, in-depth expertise and professional team, and are pleased to continue working with them on our third furnace," said Young-Min Kim, Technical Team General Manager of Techpack Solutions at the time of signing the contract.

Verescence acquires Pacific Glas

In one of the most significant developments in South Korean glass industry, in early 2021 France-based speciality container glass producer Verescence acquired a majority stake in cosmetics & perfumery container glass producer Pacificglas, a subsidiary of Korean cosmetics company Amorepacific.

An expert in luxury glass packaging for the perfumery & cosmetics industries, Verescence produces 500 million bottles per year from its three glass production sites and its four decoration sites in Europe and North America. In 2019, the company achieved sales revenue of 309 million euros.

For the purpose of this article, Verescence CEO, Thomas Riou provided some more information on the acquisition:

Sunder Singh: What is the rationale behind the Pacificglas acquisition by your company?

Thomas Riou: We did not have an industrial base in this part of the world. Thanks to this acquisition, Verescence will establish itself in the Korean and Asian market. It's important to know that Asian brands source their glass or their components in Asia. We will therefore be able to gain access to new, very prestigious customers, starting with Amorepacific which becomes one of Verescence's biggest customers. In addition, this new position of Verescence in Asia will allow our large international customers to benefit from unparalleled global service as Asia joins Europe and the United States.

SS: Could you share some tentative details about any planned expansion in South Korea?

TR: The Verescence Pacific factory has one furnace with a capacity of 80 tons, four production lines and has extensive decorating capabilities. The size of the production unit is equivalent to what we have in the United States. More importantly, there is space to be able to double the production capacity. Our acquisition of a stake in Pacificglas, now Verescence Pacific, is only one step in our development strategy in this region of the world.

SS: South Korea has a big cosmetics market sector, but wouldn't an acquisition in one of the South East Asian countries have been better for Verescence, given the lower production cost and proximity of ASEAN markets?

TR: Our presence in Asia must correspond to our strategy of being a major player in the premium market, and it takes a long time to build this culture. We also have a very high CSR requirement: South Korea and Amorepacific have a level of requirement in this area at least equal to what we know in Europe.

SGC Solutions Co. Ltd. (formerly Samkwang Glass)

Supplying container glass products to prestigious South Korean food, beverage and pharmaceutical producers such as Oriental Brewery, Lotte Chilsung, Deahan Pharm Co., Ltd, Hite Jinro, Sajo, zeitgeist seals, Dong-A Socio Holdings and Ilwha Co., Ltd, SGC Solutions Company Limited is the second largest container glass producer in South Korea with an installed capacity of 600tpd for container glass products from two production facilities at Nonsan and Cheonan. The company operates a total of three furnaces.

SGC's Nonsan plant has an installed capacity of 200tpd



Alcoholic beverages (beer, soju and hard spirits) have been the largest contributors to the growth of the South Korean container glass industry.

for container glass products. The Cheonan production facility has an installed capacity to produce 400tpd of glass containers through two furnaces.

Established in 1967, the company changed its name from Samkwang Glass Co. Ltd to SGC Company Solutions Limited in 2020.

Kumbi Corporation

A fixture of the container glass industry since 1957, Kumbi Corporation operates two plants located in Onyang and Icheon with a total installed capacity for 450tpd of container glass with seven IS machines.

The company offers flint and emerald green glass bottles in various shapes, narrow neck pressed bottles and small bottles that are widely used for alcoholic and non-alcoholic beverages, foods and pharmaceuticals. ●

1 Figures are based on the 2020 Sustainability Report of Dongwon Industries, parent company of TechPack Solutions – page 50: [https://www.dongwon.com/upload/attachment/vision/Dongwongroup_CSR_report\(EN\)_2020.pdf](https://www.dongwon.com/upload/attachment/vision/Dongwongroup_CSR_report(EN)_2020.pdf)

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