

2014 SUSTAINABILITY REPORT





ABOUT THE REPORT

Trakya Cam Sanayii A.Ş. (hereafter referred to in this report as ‘the Company’ or ‘Şişecam Flat Glass’) is pleased to present its first sustainability report that has been prepared in accordance with the GRI G4 Reporting Guidelines for the 12 month period ending 31 December 2014 to core level. The GRI guideline provides a framework for reporting on the economic, environmental and social impacts of companies in terms of their sustainability, their targets, the activities that they undertake in relation to these impacts and the results of these activities. Further information can be found at the following link: www.globalreporting.org

This report addresses the economic, environmental and social impacts and performance of Şişecam Flat Glass’s operations in Turkey in 2014. The economic indicator data presented in this report is aligned with the consolidated results reported in Şişecam Flat Glass’s financial reporting and includes both the Company’s Turkish and overseas legal entities. The reporting boundary for other indicators such as the environmental indicators has been set as the Company’s Turkish entities for this report. It is Şişecam Flat Glass’s intention to continue to expand the scope of its Sustainability Reporting to cover its overseas entities in future reporting periods.

The Period and Frequency of the Report

This report covers the 2014 calendar year. Where available and relevant, 2013 data for comparative purposes as well as relevant updates from the year-to-date in 2015 are also included. It is Şişecam Flat Glass’s intention to continue to report annually to its stakeholders on its sustainability performance and impacts.

Feedback

Collecting stakeholder feedback is vital for helping us improve both our practices and reporting processes. Şişecam Flat Glass closely examine every issue that comes to our attention, and use any feedback from our stakeholders to continuously improve our practices. We invite our stakeholders to forward any opinions, suggestions or complaints to:

Seçil Erman

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LETTER FROM ŞİŞECAM CEO



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OUR FOCUS IS ON INTEGRATING SUSTAINABILITY IN ALL THAT WE DO AND ON BEING A RESPONSIBLE CORPORATE CITIZEN AND GLOBAL LEADER IN OUR INDUSTRIES IN TERMS OF INNOVATION AND TECHNOLOGY

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To Our Stakeholders,

I am delighted to present the first Sustainability Report of Trakya Cam Sanayii A.Ş. prepared following the Sustainability Reporting Guidelines (GRI) G4 Core level of the Global Reporting Initiative for 2014. In addition to this Report, we have simultaneously issued Sustainability Reports for the operations in Turkey of Şişecam Group, Glassware and Glass Packaging Businesses and Soda Sanayii A.Ş. from our Chemicals Business in accordance with GRI G4.

We have been operating as a responsible company for 80 years that is fully committed to respecting people and the environment whilst creating high-quality and energy-efficient products that enhance people's lives. At the same time, we are steadily moving towards our target of being one of the top three glass companies globally and in providing products that add value and that can enrich all aspects of life.

In addition, we are in constant interaction with our global stakeholders. Our products reach millions of customers through our operations in 44 plants in 13

countries and our exports to 150 countries as a result of our production network across the globe in Flat Glass, Glass Packaging, Glassware and Chemicals Businesses.

With the production of 4.2 million tons of glass, 2.1 million tons of soda ash and 4 million tons of industrial raw materials in 2014, our Group is taking concrete steps towards sustainable growth with our financial performance. Despite difficult economic conditions in some of the markets where we operate in 2014, Şişecam Group not only increased its net sales income by 15% to TRY 6.9 billion but also increased its share of international sales to 52% of total turnover. We also successfully maintained our BA1 and BB+ corporate credit ratings by international rating agencies Moody's and S&P in 2014. In addition, as exemplifying our strong reputation as an ethical and responsible company, our Group was evaluated* for its Corporate Governance practices for the first time in 2014 and achieved a high score of 9.28, which placed us in the upper ranks amongst the highest scoring industrial companies in the initial assessment.

* The Corporate Governance assessment is conducted by Saha Kurumsal Yönetim ve Kredi Derecelendirme Hizmetleri A.Ş. (SAHA).

Being fully aware of our responsibilities in the global ecosystem, we consider sustainability not just as financial continuity but as a long term vision that incorporates issues and opportunities related to environmental protection, natural resources, raw materials, consumptions, customers, employees and values and we integrate our sustainable activities

ENERGY EFFICIENCY

We are one of the largest energy consumers in our country with an approximate annual natural gas consumption of 1.5 billion m³. Therefore, energy and energy management are among our most material topics. Our Group targets using natural resources as efficiently as possible, reducing the environmental effects of our operations and continually increasing energy efficiency as part of our corporate environmental and energy strategy. Linked to these plans, we have started applying our Environmental and Energy

INNOVATION

We are targeting being the leader in our selected areas and adapting the fast developments in glass science and technology, during constant innovation to develop highly competitive products and technology ownership. Our Group has incorporated our corporate R&TD (Research and Technological Development) activities that started in 1976, under our "Science and

COMPLIANCE WITH INTERNATIONAL STANDARDS

As a global player, our Group is committed to keeping its operations at international standards level. Consequently, almost all of our facilities both in Turkey and internationally have been certified to international standards for their quality, environment, energy, and occupational health and safety management systems.

All of our activities related to occupational health and safety are performed in line with international best practices. As a result, our Occupational Health and Safety Policy has been implemented to cover all our facilities in Turkey and internationally. Programs, training and activities are being implemented to help us move towards our target of reducing accidents and injuries to zero in all our workplaces.

While improving and applying strategies that support our global vision, we have continued to improve our

fully throughout our operations. Consequently, our Group focuses its sustainability activities on current and emerging topics through the value chain with the most activities connected to three main topics: energy efficiency, innovation, and compliance with international standards.

Policy, in all our global operations. We have already achieved significant savings as a result of increasing energy efficiency and reducing energy consumption and associated greenhouse gas (GHG) emissions in our operations in Turkey and internationally. We have many innovative projects focused on increasing energy savings and there are numerous examples outlined in this report, such as energy efficient furnaces, waste heat recovery and recycling projects.

Technology Center" which is the only and most well equipped center of glass and glass products in Turkey, and one of only a few in Europe.

The future in glass requires in depth expertise and innovation. As a result, we are focused on developing production technologies and enriching our product portfolio with products that add value.

human resources management in order to attract and retain the workforce that will add value globally and in extending our corporate culture. Similarly, we place importance on equal opportunity in performance management, career development, and training and development programs for all our employees.

In recognition of our responsibilities as a global company, we are determined to continue to improve our sustainability performance and make further progress in sustainability by launching new targets and projects throughout our global operations.

I would like to take this opportunity to thank all our stakeholders for their support, valuable contributions and the trust you have shown in Şişecam Group as we progress along our sustainability journey.

Sincerely,

Prof. Dr. Ahmet Kirman

Şişecam Vice Chairman and CEO

LETTER FROM FLAT GLASS PRESIDENT



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WE ALWAYS ENDEAVOR TO OPERATE RESPONSIBLY IN ALL OUR BUSINESS UNDERTAKINGS AND THE NEED TO OPERATE SUSTAINABILITY IS INTRINSIC TO ALL THAT WE DO AND FIRMLY ENGRAINED IN OUR BUSINESS STRATEGY.

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I am delighted to present our first Sustainability Report prepared in accordance with the GRI G4 Sustainability Reporting Guidelines of the Global Reporting Initiative for 2014.

Founded in 1978 as a subsidiary of Türkiye Şişe ve Cam Fabrikaları A.Ş. Trakya Cam Sanayii A.Ş. carries out the activities of Şişecam Group, in the field of flat glass and is the 5th largest in the world and 2nd largest in Europe in terms of production capacity. With its plant inaugurated in 1981, Trakya Cam Sanayii A.Ş. became the first company across a broad region spanning from Eastern Europe and the Balkans to the Middle East and North Africa to use the modern float technology in production. Since then, the Company has been a pioneer in the development of flat glass both in Turkey and in the region, introducing many firsts to the industry.

Trakya Cam Sanayii A.Ş., always endeavors to operate responsibly in all our business undertakings and the need to operate sustainability is intrinsic to all that we do and firmly engrained in our business strategy. We recognise that our reputation and legacy as a growing global company in an energy intensive sector bring great responsibility for now and for the future. We

have prioritised the areas that are most material to us and where we can achieve the greatest impact in terms of cost reduction and environmental sustainability . These areas include reducing energy consumption and associated greenhouse gas (GHG) emissions and improving energy efficiency in all our operations, through a focus on innovation and an implementation of International Operating Standards and best practice within all aspects of our business operations in Turkey and internationally. Indeed, in our ambition to stay a world-class glass manufacturer, all our factories in Turkey are already certified to the international ISO Standards for management systems including for quality (ISO 9001), and ISO/TS 16949 environment (ISO 14001), energy (ISO 50001) and health and safety (OHS 18001). In our quest to be a global leader, we often go beyond the national requirements for compliance within the countries in which we operate. safety and well-being of our employee is our top priority. We follow a systematic approach for health and safety at all our plants and undertake a wide range of initiatives in order to avoid accidents and injuries and our target is always to have zero accidents. In line with all of Şişecam Group companies, all our operations are following a stringent Occupational Health & Safety (OHS) Policy that was updated in 2014.

2014 PERFORMANCE

In 2014, Trakya Cam Sanayii A.Ş. achieved total revenue of TRY 2,019 million and an annual growth of 35.7% from 2013 in local currency. In addition, Trakya Cam Sanayii A.Ş. increased its total sales revenues of architectural glass by 29% YoY in 2014 with contribution from a wide-range of value-adding products. Despite difficult market conditions, Trakya Cam Sanayii A.Ş. increased its international architectural glass sales by 42% YoY in TRY terms. Continuing its ambitious growth in the automotive glass segment through its activities in auto glass facilities in Turkey Bulgaria, Germany, Slovakia and Hungary Trakya Cam Sanayii A.Ş.'s automotive glass division captured a higher share of the new vehicle projects recently initiated in the Turkish and European markets and increased its sales by 16% YoY in 2014. Through our strong financial performance, we help ensure the sustainability of our business to the benefit for our stakeholders.

Sustainability is the most prior goal in the areas of carrying on profitability, R&D activities, making investment, and providing employment. Sustainability of environmental responsibility is another priority as well. The steps that we are taking to improve our sustainability performance are outlined below.

Firstly, through product improvements we are helping to create more energy efficiency products that can significantly reduce the energy consumption and associated release of greenhouse gas (GHG) emissions during the life-cycle of the products. While we operate in an energy intensive industry, our products can be an important part of the solution, allowing far more energy and associated greenhouse gas (GHG) emissions to be saved than consumed in the initial consumption. Moreover, studies indicate that buildings are one of the largest sources of total energy consumption and therefore, our latest glass products including more energy efficient glazing and solar glass can play a huge contribution to improving building energy efficiency, enhancing lighting and reducing heat losses. Indeed, the fact that our coated glass sales are increasing much more rapidly in comparison to other conventional products can be seen as just one indication that the demand for more efficient products technologies is increasing. In our automotive business, we are developing new technology to fit cars with heat reflective materials that reduce the need for air conditioning in cars as well as lighter glass material that helps reduce fuel consumption. Another focus area is

on improving safety in vehicles and we are helping to achieve this through our products that include acoustic windshields and shatterproof glass, which go beyond legislative requirements.

Secondly, we are focusing on process improvements through innovation projects that include the design of more energy efficient electric motors and fans, a heat recovery system to recover the energy from the furnace chimneys and 6sigma projects to reduce the amount of glass wasted. Managing energy consumption efficiently is one of our most important priorities, since we operate in a very energy intensive sector. For example, in 2014 our operations in Turkey consumed approximately 12.4 billion MJs of energy. We have established systematic policies and processes to measure our energy consumption and efficiency and have many projects already completed or underway to help drive further improvement. For example, we have set up a facility that generates electricity from waste-heat recovery in our float glass plants. Under this project, Yenişehir Plant produced 28,400 MWh of electricity in 2014 and was named the "Most Successful Industrial Enterprise" within the scope of the Energy Efficiency Enhancement in Industry Projects (SEVAP). In addition, we have opened a new furnace in 2014 at Polatlı - Ankara, which has a state of the art design and capacity and will be amongst the most energy efficient in the whole Şişecam Group.

In Trakya Cam Sanayii A.Ş., our research and development (R&D) practices are very important to us as a company, and accordingly a major part of our investment funds allocated for the use of R&D department for the improvement of current products and the development of new technologies for the sector. Having the most sophisticated laboratories in Turkey, various projects that focus on-efficiency and alternative energy sources, amongst others, are underway in collaboration with NGOs, universities and public institutions.

In closing, I would like to thank our employees and all our stakeholders for helping us achieve our targets in 2014. We are confident that with the continued commitment and drive from our employees, combined with feedback and guidance received from other stakeholders, we will continue to be successful and to improve as we progress along our sustainability journey.

Sincerely,



Reha Akçakaya
Flat Glass President



Trakya Cam Sanayii A.Ş.: an Introduction

- ◆ Global Scale and Presence
- ◆ Organizational Structure
- ◆ Mission, Vision and Values
- ◆ Risk Management and Internal Audit Activities
- ◆ Compliance with the Law and Legislation
- ◆ Ethics and Code of Conduct

GLOBAL SCALE AND PRESENCE

Founded in 1978 as a subsidiary of Türkiye Şişe ve Cam Fabrikaları A.Ş., Trakya Cam Sanayii A.Ş. (hereafter referred to in this report as 'the Company' or 'Şişecam Flat Glass') carries out the activities of Şişecam Group in the field of flat glass and it is the 5th largest in the world and 2nd largest in Europe in terms of production capacity in 2015. With its plant inaugurated in 1981,

the Company became the first across a broad region spanning from Eastern Europe and the Balkans to the Middle East and North Africa to use the modern float technology in production. Since then, the Company has been a pioneer in the development of flat glass both in Turkey and in the region, introducing many firsts to the industry.

TRAKYA CAM SANAYİİ A.Ş. IS THE 5TH LARGEST IN THE WORLD AND 2ND LARGEST IN EUROPE IN TERMS OF PRODUCTION CAPACITY IN 2015.

Today, the Company carries out its production activities with a total of eleven float lines* in four main segments:

- Architectural glass (flat glass, patterned glass, mirror, laminated glass and coated glass)
- Glass for automobiles and other vehicles
- Solar glass
- Home appliances glass

*float lines in Egypt are excluded.

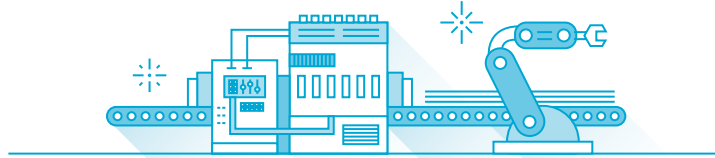
Two of these float lines started production in 2014 (Polatlı and Russia) and one of them was under construction during 2014 (Bulgaria 2).

As a major glass supplier for the construction, automotive, energy and home appliance industries with

its manufacturing activities in nine different countries, its strong partnerships and expanding product range, the Company currently pursues operations in line with its vision spelled out as "being a fast growing global flat glass company with its strong brands and innovative solutions".



PRODUCTION IN
9
COUNTRIES



ONE OF THE
HIGHEST PRODUCTION CAPACITY
FLOAT LINES IN EUROPE AT POLATLI CAM SANAYİİ A.Ş.



2nd LARGEST
FLAT GLASS
MANUFACTURER IN
EUROPE AND **5th**
IN THE WORLD



29% INCREASE
IN SALES REVENUES
IN THE BASIC GLASS
PRODUCTS



ONLINE AND
OFFLINE COATING
LINES FOR THE
VALUE ADDED
PRODUCTS

ORGANIZATIONAL STRUCTURE

ŞİŞECAM FLAT GLASS POSSESSES A FLOAT GLASS PRODUCTION CAPACITY OF 1,690,000 TONS/YEAR THROUGH SEVEN FLOAT LINES IN TURKEY.

ORGANIZATIONS AND NATURE OF OPERATIONS

Şişecam Flat Glass operations in Turkey are carried out from five production plants.

The latest investments of Şişecam Flat Glass included the establishment of a joint venture in flat glass in 2013 by taking over 50% stake in HNG Float Glass Limited (HNG) in India, and the acquisition of Richard Fritz Holding in Europe. In 2014, the Company launched one float line in Polatlı, Turkey, and jointly established a float line in Alabuga, Russia in partnership with Saint-

Gobain. Regarding automotive glass investments, two new facilities went into operation in Russia and Romania.

The shareholding structure of the Company is summarised below. As can be seen, Şişecam Group ('Türkiye Şişe ve Cam Fabrikaları A.Ş.') held almost 70% of the shares with 30% publicly traded as at the end of the reporting period.

ŞİŞECAM FLAT GLASS SHAREHOLDING STRUCTURE (AS OF DECEMBER 2014)

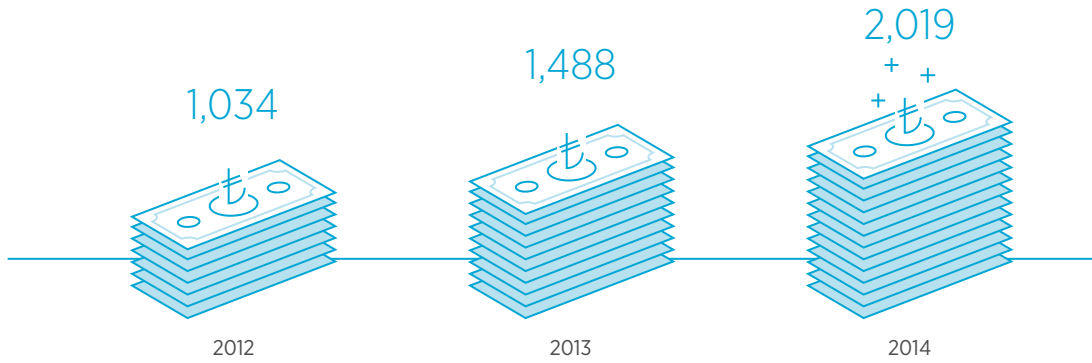
Shareholder	Amount TRY	Share %
Türkiye Şişe ve Cam Fabrikaları A.Ş.	512,750,995	69.38
Şişecam Group Companies	2,964,085	0.40
IFC	480,256	0.06
Publicly Traded	222,804,664	30.16
TOTAL	739,000,000	100.00

FINANCIAL PERFORMANCE OF ŞİŞECAM FLAT GLASS IN 2014

Şişecam Flat Glass increased its total sales revenues of architectural glass by 29% YoY in 2014 with the contribution of value-added products. Despite the negative developments in the markets, Şişecam Flat Glass increased its international architectural glass sales by 42% YoY (Year on Year) in TRY terms.

Continuing its ambitious growth in the automotive glass segment through its activities in auto glass facilities in Turkey and Bulgaria, Şişecam Flat Glass's automotive glass division captured a higher share of the new vehicle projects recently initiated in the Turkish and European markets, and increased its sales by 16% YoY in 2014.

TOTAL SALES IN TURKISH LIRA (MILLIONS)



TOTAL ASSETS
TRY 4,384
MILLION



TOTAL EQUITY
TRY 2,537
MILLION

CORPORATE GOVERNANCE

Şişecam Flat Glass follows Şişecam Group's principles of equality, transparency, accountability and responsibility, which are the cornerstone of its approach to corporate governance. Our vision is to be a global industry leader, and technological development, innovation and a strong commitment to corporate governance are the core aspects to achieving this vision. In order to realize

our long-term vision for our company, the adoption of corporate governance principles and implementation of best practice are paramount. This vision helps ensure we can appoint board members and senior managers with the skills, experience and perspective to make the strategic decisions needed to allow us to realize our long-term goals.

MISSION, VISION AND VALUES

This section outlines the Mission, Vision and Values that apply to all Şişecam Flat Glass operations as a subsidiary of Şişecam in Turkey and internationally.

MISSION

As a subsidiary of Şişecam Group, Şişecam Flat Glass follows Şişecam's mission:

"To be a company that adds value to life through its high-quality products, offering comfort, and that respects people, nature and the law."

ŞİŞECAM FLAT GLASS VISION

"To be a fast growing global flat glass company with its strong brands and innovative solutions."

VALUES OF ŞİŞECAM GROUP

Şişecam Flat Glass is a subsidiary of Şişecam Group and follows all Group vision, mission and values.



WE DERIVE STRENGTH FROM OUR TRADITIONS AND SUPPORT ONE ANOTHER:

- ◆ We shall initiate changes that would create a successful future based on strength from our experience and knowledge.
- ◆ We shall enhance our reputation through our sustainability commitments and results-oriented approach.
- ◆ We shall maintain our legacy and tradition, and it shall be our duty to pass these onto the future generations.



WE THRIVE AND DEVELOP ONE ANOTHER

- ◆ We shall encourage each other to constantly develop our skills.
- ◆ We shall continuously be open to changes that would bring us closer to our vision; and we shall make efforts to develop and improve each other with the help of our stakeholders.
- ◆ We shall consider creativity and innovation as a means of development, and inspiration.



WE EXHIBIT A FAIR AND TRANSPARENT MANAGEMENT APPROACH

- ◆ We shall treat all of our stakeholders equally, and we shall pursue win-win strategies that benefit both our stakeholders and our business.
- ◆ We shall measure the performance with the same scales, and make the performance evaluations in a fair manner.
- ◆ We shall act consistently toward our stakeholders; and we shall not give promises we cannot keep.



WE CARE FOR OUR ENVIRONMENT

- ◆ We shall commit to our business to achieve the growth and profitability expectations of our shareholders and business partners.
- ◆ We shall be customer-focused; we shall quickly respond to suggestions and complaints of our customers, and improve the quality of products and services.
- ◆ We shall closely monitor technologies and make appropriate investments as part of our responsibility to the environment and nature; we shall also promote awareness on these issues.



WE RESPECT DIFFERENCES

- ◆ We shall hire employees from different countries and different cultures; we know that this diversity shall add value to our business.
- ◆ We shall freely express our different opinions.
- ◆ We shall allow different job categories to work as a team, to learn from each other, and to develop each other in order to sustain our shared-values.

RISK MANAGEMENT AND INTERNAL AUDIT ACTIVITIES

As a subsidiary of Şişecam Group, Şişecam Flat Glass follows Şişecam's risk and internal audit activities. Operating in an intensively competitive environment, Şişecam Group implements efficient risk management and internal audit processes in order to provide adequate risk assurance to its stakeholders. The global crisis that started in 2008, coupled with the geopolitical risks that have become tangible in geographies where it operates, resulted in increased uncertainty. Within the increasing customer expectations, tightening regulatory requirements and developments in corporate governance, Risk Management and Internal Audit functions were separated in order to focus on all of the plants by the year 2014.

Under this structure, our Group handles existing and potential risks with a proactive approach and carries out audit activities with a "risk-based" perspective. At Şişecam Group, risk management and internal audit activities have been structured under the parent

RISK MANAGEMENT

At Şişecam Group, risk management activities are carried out with a holistic and proactive approach based on enterprise risk management principles. The potential effects of such risks with each other and the characteristics of the countries where the Group operates are also taken into account in the course of operations. Thanks to this perspective, geographical distribution and risk diversification are converted into a significant advantage, and any risks encountered as specific to a country and/or a business segment are integrated with the risk processes before they are implemented elsewhere and the interaction of risks with each other is monitored. Thus, decision support

INTERNAL AUDIT

The objective of the internal audit activities, which have been carried out within the Group for many years, is to assist the healthy development of the Group's companies, to ensure uniformity in practices, and to guarantee that all activities are performed in compliance with internal and external regulations, as well as the execution of corrective actions in a timely manner. In line with the stated objectives, audit

company. The activities are directly reported to the Board of Directors of the parent company in coordination with the CEOs, managing the core operational areas. The results of regular and planned meetings held with the "Risk Committee", the "Audit Committee", and the "Corporate Governance Committee" which have been established in Şişecam Group companies listed in Borsa Istanbul, are reported to the Boards of Directors in accordance with the legislation. During the activities carried out with the aim of establishing a corporate structure, providing the required assurance to stakeholders, protecting the tangible and intangible assets of Şişecam Group, minimizing the losses caused by uncertainties and maximizing benefit from potential opportunities, communication between the internal audit and risk management functions is maintained at the maximum level and is directed toward the goal of supporting decision-making processes and increasing management efficiency.

processes are assisted and efficient use of resources is ensured. The risk catalogues for all business segments across the Group are periodically updated with the participation of the Group employees and the risks are ranked according to their importance. By taking the "risk appetite" of the Board of Directors into account, with regard to analysed risks, the strategies to be implemented are established and the necessary measures are taken. These risk management activities are not only limited to financial and strategic risks, but also cover operational risks such as production, sales, health and safety, emergency management, information technologies, environment.

activities are being carried out on ongoing basis within the bodies of the companies of the Group operating domestically and abroad. Internal audit is carried out in accordance with the periodic auditing programs approved by the Board of Directors. During the preparation of the audit programs, the results of the risk management activities are also used, meaning that "risk-based audit" practices are implemented.

COMPLIANCE WITH THE LAW AND REGULATIONS

Şişecam Flat Glass, a subsidiary of Şişecam Group pays regard to complying with the law and legislation with care and caution in every respect and as a leading company and the earliest group in glass production in Turkey; it always shows maximum awareness in obeying competition law and acts due to being the leader in Turkey in its sectors.

In this regard, employees of the Group are subjected to training regarding regulation and legislation of the competition by the legal consultancy department from time to time. Şişecam Group management expects all its group companies to observe the competition legislation in all their agreements, actions and conducts and that the Legal Consultancy Department will supervise whether they follow the rules in an effective way.

Şişecam has comprehensive policies and principles in place that all affiliated companies in Turkey and internationally are required to follow in terms of anti-bribery and corruption, internal audit and risk management and it is also applied for Şişecam Flat Glass. For example, the aim of the Anti-Bribery and Corruption Policy¹ is to clearly set out the commitments and position of Şişecam Group with regards to bribery and corruption clearly and to help uphold the corporate image. This policy, being an integrated part of Code of Conduct adopted by the Group, aims to provide the necessary information for prevention of bribery and corruption in all Group activities and to specify responsibilities and rules in that regard.

ETHICS AND CODE OF CONDUCT

Şişecam including Flat Glass Business companies carry out their activities following Şişecam Group Code of Conduct. There are five main principles in the Code of Conduct: Honesty, Transparency,

Impartiality, Confidentiality, and Compliance with laws and regulations. For the complete Şişecam Code of Conduct, please visit the following website: www.sisecam.com.tr/en/investor-relations/code-of-conduct/



¹ <http://www.sisecam.com.tr/en/investor-relations/anti-bribery-and-corruption-policy-2/>



Our Sustainability Approach

- ◆ Sustainability Governance
- ◆ Approach to Stakeholders
- ◆ Approach to Materiality
- ◆ Approach to Standards and Organizations
- ◆ Approach to Sustainable Products

Şişecam Flat Glass has an organizational structure supporting Şişecam's policy of sustainability. Quality, Environmental and Technical Standardisation Department of Şişecam Flat Glass works compatible with the Corporate Development and Sustainability Department of Şişecam. As mentioned above environment, energy and raw material consumption are the most important issues. Şişecam Flat Glass takes care about sustainability as much as quality. When defining the process principles, making decisions about supply of the raw materials, controlling the efficiency

of the processes; sustainability is always regarded as the main issue. This department also supported with the environmental officers of the plants in terms of working in compliance with the governmental regulations, carrying out the Environmental Management System and its audits at the plants. In addition, these officers support Quality, Environmental and Technical Standardisation Department for reporting the environmental performance of the plants to the top management as well.

SUSTAINABILITY GOVERNANCE

Sustainability is an integral part of our all-inclusive approach. Şişecam Flat Glass considers sustainability not just as financial continuity, but rather as an integrated concept that expands by also preserving the environment, natural resources, inputs, consumption, customers and values. Şişecam Flat Glass, as a subsidiary of Şişecam, cooperates with Şişecam Corporate Development and Sustainability Department regarding sustainability issues.

In this regard, Şişecam Corporate Development and Sustainability Department carries several studies to promote and improve the efficiency in all segments of our business. The chief of this department who reports directly to the CEO of Şişecam, is a member of the Executive Board and is responsible for overseeing the following functions beside his other responsibilities.



Environmental Performance

Co-ordinates projects aimed at developing and implementing principles to monitor, report and continuously improve Şişecam Group's environmental performance.



Energy Supply

Supplies Şişecam's energy needs, especially natural gas and electricity, by evaluating opportunities for bulk purchases in order to create competitive advantage.



Energy Efficiency

Continuously creates improvement and saving plans with the activity groups and ensures the implementation of such plans. Monitors and develops energy efficiency systems across plants and units.



Corporate Development And Change Management

Responsible for improving processes and operations with continuous development approach, managing the governance of Şişecam Operating Model, leading Project Management Office activities and the Change Management Program in the organization.



OUR APPROACH GUIDES OUR BUSINESS CHOICES, CUSTOMER ORIENTATION, COMMUNITY AFFAIRS AND INDUSTRIAL RELATIONS AND FOCUSES ON THE ISSUES THAT ARE MATERIAL FOR OUR STAKEHOLDERS AS WELL AS FOR OUR COMPANY.

SUSTAINABILITY COMMITTEE

Şişecam Sustainability Committee is established in 2015 in order to prioritize and realize the sustainability related issues for Şişecam Group. The chamber of the Committee is the chief of the Corporate Development and Sustainability Department and the members are Production Vice Presidents of Businesses, Sustainability Director, Human Resources Director, Corporate Communication Director and Industrial Relationship Director.

The Committee has five working groups, which are named as Environment, Energy, Occupational Health and Safety, Innovation and Social Responsibility.

Alongside our continued focus of building on our legacy, Şişecam is adopting a challenging roadmap to

guide our future efforts and initiatives in sustainability. This roadmap includes goals for strong, relevant key performance indicators for our business; leadership in compliance with international sustainability standards and best practice; excellence in research and technological development; and a robust process of working with our stakeholders and re-identifying priority issues for our business. Our approach guides our business choices, customer orientation, community affairs and industrial relations and focuses on the issues that are material for our stakeholders as well as for our company.

We comply with and benchmark ourselves against leading best practice internationally in sustainability.

Strategic Goals	Progress
More efficient use of energy	Increasing brand and product recognition in Turkey and targeted markets
Increasing resource and investment efficiency	Ensuring the quality standards the customers expect
Improving employee efficiency	Improving logistics performance
Being the solution partner to clients	Allowing R&D resources in order to continue having the necessary product variety and technological background to direct the market

APPROACH TO STAKEHOLDERS

Şişecam Flat Glass, along with the other companies of Şişecam Group, uses the stakeholder feedback it receives to help determine its strategically important issues and focus on the sustainability topics that have most relevance to the company and its stakeholders in its sustainability reporting.

The principal stakeholder groups within Şişecam Flat Glass include employees, suppliers, customers and public institutions. All stakeholders can communicate with us through the email addresses on the corporate website. The main stakeholder groups are prioritized based on their ability to influence our company and the level of the company’s impact on stakeholders.

As part of the ongoing stakeholder engagement program that formed a direct input to the preparation of this GRI G4 report, the company applied the GRI

principle of ‘stakeholder inclusiveness’ for defining report content, reviewed its stakeholder engagement program and undertook specific additional engagement where it required further information to ensure that it fully understood the priorities of its most important stakeholders based on their interest in, and influence over the activities of our organization. Examples of stakeholder engagement activities are provided in the Corporate Social Responsibility section on page 72.

Şişecam Flat Glass informs, consults, negotiates and proactively monitors the expectations of its stakeholders with regard to its sustainability performance through a range of different engagement channels, such as strategic collaborations, one-to-one meetings, conferences, seminars, workshops, focus group studies, surveys and similar platforms.

KEY STAKEHOLDER GROUPS AND ENGAGEMENT PLATFORMS

EXTERNAL STAKEHOLDERS

Stakeholder Group	Engagement Platforms	Frequency of Stakeholder Engagement	Evaluation of Engagement in the Reporting Period
Customer	<p>Şişecam Flat Glass engages with its customers at the level of its business lines.</p> <p>However, the main means of customer engagement include customer satisfaction surveys, social media, meetings and conferences, feedback received via telephone and email.</p>	<p>Continuous interaction by email, social media and telephone</p> <p>Ad hoc meetings as needed</p>	<p>Şişecam Flat Glass engages with its customers as part of routine business activity. Customers are able to submit their feedback regarding the Company's environmental and social performance through a number of channels.</p> <p>Şişecam Flat Glass considers its customers the focus of all its activities.</p>
Public authorities/ Regulatory institutions	<ul style="list-style-type: none"> • Systematic reporting • Meetings, forums, conferences • Press releases • One-to-one meetings 	Minimum once a month	<p>We demonstrate the utmost care in complying fully with the law and regulations in all of our activities.</p> <p>For Compliance, please refer to page 15.</p>
Suppliers	<p>Typical methods of engagement with all suppliers includes:</p> <ul style="list-style-type: none"> • Daily/Routine business cycle • Meetings • Email communication 	<p>Continuous as general course of business (e.g. by email)</p> <p>Meetings as required</p>	<p>We are committed to addressing the environmental impact caused by suppliers, in addition to the direct environmental impacts resulting from our internal operations.</p>
Non- governmental organizations	<ul style="list-style-type: none"> • Strategic collaborations • Events • Regular Meetings 	Minimum once a month	<p>Sharing with the community is viewed as very important to our company, which supports NGOs regarding social, economic and environmental issues and by carrying out joint projects with them. For Corporate Social Responsibility activities please refer to page 72.</p>
Media	<ul style="list-style-type: none"> • Press conferences • Press releases • Interviews 	Minimum once a month	<p>We are in regular contact with national and international media in order to raise awareness about the Company and deal with any queries.</p>
Community	<ul style="list-style-type: none"> • Media 	Varies depending on the type of initiative	<p>We announce all events with via media</p> <p>For Corporate Social Responsibility activities please refer to page 72.</p>

INTERNAL STAKEHOLDERS

Stakeholder Group	Engagement Platforms	Frequency of Stakeholder Engagement	Evaluation of Engagement in the Reporting Period
Employees	<ul style="list-style-type: none"> • Employee Satisfaction Survey • Suggestion and Idea Platforms • Employee Interviews • Seniority Award • Recognition and Reward System 	Varies depending on the type of engagement	Şişecam Flat Glass's most important asset is its people. Şişecam companies are leading companies in their sectors in terms of training and support provided to its human resources.
Top Management	<ul style="list-style-type: none"> • Executive Board Meetings • Email Communication 	Minimum once a month	<p>The Executive Board which includes the Chief Corporate Development & Sustainability Officer met on a regular basis during the reporting period, assessing a range of sustainability issues and opportunities.</p> <p>Strategic direction and day-to-day activities of the Sustainability Department are led by the Chief Corporate Development & Sustainability Officer.</p> <p>For details of the organizational profile at Şişecam, please refer to Sustainability Governance section at page 17.</p>
Shareholders, analysts and investors	<ul style="list-style-type: none"> • General Board Meetings • Meetings with analysts and investors • Phone calls/teleconferences and email communication with investors • Periodically published informative publications (e.g., Annual Reports, CDP reporting, Earnings and Interim Reports) • Social media • Investor Feedback Mechanism 	Varies depending on the type of engagement	The Company, which is in regular communication with its shareholders and investors through various channels, met all information disclosure requirements under Turkish legislation during the reporting period.

Concerns related with sustainability are raised with the Şişecam Corporate Development and Sustainability Department and appropriate actions are taken, including undertaking specific initiatives, and implementing policy recommendations. The critical concerns raised during the reporting period are listed below.

CRITICAL CONCERNS RAISED BY KEY STAKEHOLDER GROUPS AND OUR RESPONSE

Critical Concern	Stakeholder Group that raised the Critical Concern	Our response to Critical Concern
To report on our environmental impacts and performance	Customers, employees, investors	Based on the feedback received, we published our first Sustainability Report for the 2014 reporting period for Şişecam Flat Glass, which we prepared in line with GRI G4 Core level. In addition, we prepared Annual Monitoring Reports relating to Environmental and Social Issues for the IFC and EBRD for our all production companies in Turkey and abroad.
To report on carbon emissions of all our production plants in Turkey and in Bulgaria.	Customers, NGOs, investors	Şişecam has responded to the CDP investor program since 2011 and supply chain program since 2012. In 2014, we were one of the best performing companies in Turkey for CDP with a disclosure score of 85% and a performance score in the Level B Band. Operations of Şişecam Flat Glass in Turkey and Bulgaria are covered in the Şişecam CDP responses.
To report on financial performance	Shareholders	We published our Annual Report, which also included information relating to our environmental, HR, Industrial Relations and R&D activities and performance.
To increase employee motivation	Employees	Projects implemented in 2014 to improve employee motivation included: Şimdi! Social Activities Club, Flexible Benefits, Proposal Development System etc.

APPROACH TO MATERIALITY

Şişecam Flat Glass prioritise the interests and expectations of its key stakeholder groups (including employees, investors, customers, government entities and non-profit organizations) when identifying sustainability risks and determining their magnitude.

As part of the preparation for this report and the GRI G4 data collection and reporting process, we undertook a detailed analysis of our most material issues across our businesses, linked these issues to the corresponding GRI G4 indicators that we have reported on in this report and that we list below. We also took into account stakeholder feedback received as part of our regular engagement with stakeholders during the reporting period and used this to calibrate the GRI G4 materiality analysis undertaken in 2015.

In carrying out the G4 materiality assessment for the Sustainability Report, we applied the GRI Principles for Defining Report Content and Quality so as to identify the information to be disclosed, by considering the activities, impacts, and the substantive expectations and interests of our stakeholders. We applied the Principle of Materiality by ensuring that the issues regarded as most important to our key stakeholder groups were prioritised in this report.

We have also linked our most material issues to our priority areas for sustainability, as explained in the section on our Sustainability Approach.

We applied the Principle of Sustainability Context by taking into consideration general trends in sustainability in Turkey and internationally and amongst our peer group, which helped us ensure that the report was materially complete. We also applied the Principle of Completeness by making sure there was no material information omitted by checking the report content against feedback received from our key stakeholder groups during the Reporting Period and through top management’s review of the Report’s completeness and accuracy. The Company applied the Principle of Stakeholder Inclusiveness by ensuring that the most material issues raised by our stakeholders, including from satisfaction surveys and workshop meetings, have been covered in this report.

The results of the Şişecam Flat Glass’s G4 materiality analysis are shown below. Material topics were subsequently linked to the corresponding GRI G4 aspects and had regard to whether the aspect was material within our organization, outside the organization, or both. Topics are prioritized based on their significance of impact.

The results of this prioritisation were approved by the management and have determined the focus and level of detail provided on each topic in this report.

In addition, we have documented our management approach to each material aspect in the relevant sections throughout this report.

ŞİŞECAM FLAT GLASS’S MATERIALITY ASPECTS FOR SUSTAINABILITY

Anti-competitive behaviour	Equal remuneration for women and men
Anti-corruption	Freedom of association and collective bargaining
Compliance in product responsibility	GHG and other emissions
Customer health & safety	Indirect economic impact
Customer privacy	Labour & management relations
Diversity	Market presence
Economic performance	Marketing communications
Employment	Occupational health and safety
Energy consumption	Product and service labelling
Environmental compliance	Training and education*
Environmental issues and impacts of products and services	Waste management

Note: All issues are considered material inside and outside the company’s boundary with the exception of those with an asterisk in the list above that are considered material only within the company’s boundary. Aspects are arranged alphabetically.

APPROACH TO STANDARDS AND ORGANIZATIONS

As a company with worldwide exports and production in 9 countries, it is critical for Şişecam Flat Glass to comply with international standards for creating ethical guidelines to allow us to manage our environmental, social and economic impacts. We are always looking to apply the most up-to-date and highest standards for our local and global operations. Every product, every business practice and every interaction with our partners are managed by international standards and best practise. Continuous monitoring of our processes and capabilities is essential for living up to our responsible business legacy. We are fully aware that the implementation of global frameworks is essential and necessary to realize our vision of becoming a leading global glass manufacturer, and we strongly believe the intrinsic value of these frameworks for international expansion, product portfolio development, and growth of our market share through new investments. In addition to complying with international standards for quality, environment, occupational health and safety, and business partner and customer satisfaction, we also endorse national and international principles and initiatives as listed below.

All Şişecam Flat Glass products are produced according to European standards. All the processes and products are under control of internationally recognized management systems at the plants. In addition, Şişecam Flat Glass float products have the product compliance certificates from TSE.

The CE mark is affixed to all Şişecam Flat Glass products for construction works. The CE mark indicates that Şişecam Flat Glass takes responsibility for the conformity of the product with all applicable requirements set out in the EU.

The Quality, Environmental and Technical Standardisation Department and Marketing Department follows the standardization and lobbying studies in the glass sector both in Turkey and in Europe by the membership activities. Glass for Europe and IMSAD (Association of Turkish Construction Material Producers) are the most important associations. There are members from Şişecam Flat Glass working for the committees of these associations.



WE ARE ALWAYS LOOKING TO APPLY THE MOST UP-TO-DATE AND HIGHEST STANDARDS FOR OUR LOCAL AND GLOBAL OPERATIONS.

NATIONAL AND INTERNATIONAL MEMBERSHIPS

Association for Personnel Management in Turkey	Istanbul Chamber of Commerce
Association of Automotive Parts & Components Manufacturers	Turkish Exporters Assembly
Association of Thermal Insulation, Waterproofing, Sound Insulation and Fireproofing Material Producers, Suppliers and Applicators (İZODER)	Turkish Society for Quality
Association of Turkish Construction Material Producers (İMSAD)	Turktrade
Foreign Economic Relations Board	Uludağ Exporters Union
Glass for Europe	White Goods Industrial Society

MANAGEMENT SYSTEMS

A detailed list of internationally recognized and certified management systems that are in effect in operations in Turkey are shown below. We approach the quality of our products, protection of our environment, efficient

use of energy and health and safety of our people in our facilities with a holistic integrated management approach.

MANAGEMENT SYSTEMS AT THE PLANTS IN TURKEY

	ISO 9001 ¹	ISO 14001 ²	ISO 50001 ³	OHSAS 18001 ⁴	OTHERS
Trakya Cam Sanayii A.Ş. Trakya Plant	✓	✓	✓	✓	
Trakya Yenişehir Cam Sanayii A.Ş.	✓	✓	✓	✓	
Trakya Cam Sanayii A.Ş. Mersin Plant	✓	✓	✓	✓	
Trakya Cam Sanayii A.Ş. Autoglass Plant	✓	✓	✓	✓	ISO 16949 ⁵
Trakya Polatlı Cam Sanayii A.Ş.	✓	✓	✓	✓	

- 1. Quality Management System
- 2. Environmental Management System
- 3. Energy Management System

- 4. Occupational Health and Safety Management System
- 5. Automotive Management System



CASE STUDY: 6 Sigma Projects

To increase its competitiveness as part of its main strategy of continuous progress that focuses on quality, cost efficiency and speed, Şişecam Flat Glass has adopted the Lean Six Sigma approach and carried out an improvement program with wide participation.

In 2014, 14 Lean Six Sigma improvement projects were implemented in three factories. The results helped achieve important improvements in quality and cost reductions. Also, there was an improvement that could result in filing a patent. The target is to widen the approach in 2015. 29 improvement projects in five factories are planned.

QUALITY AND COMPLIANCE

Şişecam Automotive Plant quality control employees execute tests on products and works in progress at different intervals via sampling controls. When there is non-compliance in a reference product, production stops and corrective measures are taken. Faulty products are quarantined and prevented from going to the customer.

Quality has always been a priority for Şişecam Flat Glass. Şişecam Flat Glass not only implements the Turkish internal standards and regulations but also the European standards and regulations. Şişecam Flat Glass also aims to comply the customer expectations and local standards of the operating regions further. Also Şişecam Flat Glass has its own internal quality control tests.

There are laboratories at the production area for carrying out the product tests existing at the international standards. Some of these laboratories are supported by Science and Technology Center (STC). Also Science and Technology Center (STC), has its local accredited laboratories serving to Şişecam Flat Glass

and its Isıcam Authorized Producers for specific IGU tests.

Experienced production and quality team of the Şişecam Flat Glass evaluates the results of these tests and analysis in order to achieve the best quality for serving its customers the best. These assessments are also used as a key for further development and sustainability of the existing products. Also the feedbacks of the customers are invaluable indicators for assessing the quality level of the products. The Claims of the customers are evaluated intently. Corrective and preventive actions are taken for each claim systematically and the customers are informed constantly. Also the polls about the products and the services are taken frequently among the processors for the assessment.

For some requirements and regulations like CE marking the exterior laboratories/authorized bodies are used for the approval. These reports are shared as per request or publicly.

QUALITY POLICY

An affiliate of Şişecam Group of Companies, a global corporation with extensive know-how and production expertise, as Flat Glass Group, we shall endeavour to:

- ◆ Perform, certify, document and continually improve the requirements of the existing quality management systems in all plants where production and management functions are fulfilled,
- ◆ Ensure compliance of our production activities and products with the national and international standards and regulations in force in areas of operation, evaluate and promote continuity of compliance status,
- ◆ Ensure customer satisfaction by meeting demands and expectations of customers and providing pre-sales and after-sales technical support,
- ◆ Create and review corporate quality objectives and programs in addition to controlling them with corrective and preventive activities,
- ◆ Emphasize product quality and safety based on their relevance to human and product life and ensure continuity thereof,
- ◆ Act in line with the company's principle of customer orientation by offering technical support to our stakeholders (authorized dealers, authorized manufacturers, industrialist customers, architects, glass consultants, construction companies, investors, real estate investment partnerships etc.) and offering ideal solution suggestions for the area of use in terms of aesthetics, performance and quality,
- ◆ Become a global company leading developments with flat glass products and production thanks to R&D activities performed under Şişecam Group of Companies,
- ◆ Raise employee satisfaction, commitment and motivation through training programs meant to support development of employee continually,
- ◆ Ensure functionality of communication channels established through a fair and transparent management perspective,
- ◆ Build a sustainable future for our company economically and environmentally with the contributions of our employees, customers, shareholders, suppliers and sub-contractors

under our Quality Policy as a company dedicated to manufacturing high-quality glass products for construction, automotive, furniture and energy industry.

VICE CHAIRMAN AND FLAT GLASS PRESIDENT

WE THRIVE AND
DEVELOP TOGETHER



APPROACH TO SUSTAINABLE PRODUCTS

ENERGY EFFICIENCY AND GLASS

Since its establishment, Şişecam Flat Glass has adopted the principles of energy saving and efficient energy usage. In 1974, Şişecam Flat Glass introduced Turkey's first double glazing unit brand to the market as "Isıcam" which provides 50% heat insulation compared to single glass. 40 years ago, Isıcam was produced in a single location – Çayırova Plant. Today, in its 40th year, Isıcam with its 164 Authorized Producers in 55 cities has reached a widespread and qualified service web and keeps growing every day.

The goal of achieving better heat insulation levels with high light transmission and transparency, lead Şişecam Flat Glass to develop new generation energy efficient products. Isıcam Sinerji and Isıcam Konfor are Şişecam

Flat Glass's high performance insulation glass units which manufactured by Low-E coating technology.

Low-E coated "Isıcam Sinerji" reduces heat loss by 50% compared to Isıcam and generates savings in fuel costs.

In Turkey, nearly most of the provinces live four seasons in a year, and go through true winter and summer. Solar Control Low-E coated "Isıcam Konfor" has the same characteristics with Isıcam Sinerji and in addition reduces transmission of solar energy by 40%. While generating savings in fuel costs, also saves electricity charges emerging from air conditioning.

IN TURKEY, APPROXIMATELY 30% OF ENERGY IS CONSUMED IN BUILDINGS. ON AVERAGE, 30% OF HEAT LOSSES FROM BUILDINGS ARE THROUGH WINDOWS AND 80-85% OF WINDOW SURFACES ARE MADE OF GLASS.



VADİSTANBUL - İSTANBUL



CASE STUDIES

In Turkey, approximately 30% of energy is consumed in buildings. On average, 30% of heat losses from buildings are through windows and 80-85% of window surfaces are made of glass. Şişecam Flat Glass, as the major supplier of coated architectural glass and solar glass for PV (photovoltaics), greatly contributes to the growth of Turkey's economy and protection of its environment by increasing energy savings and production of renewable energy.

By using energy efficient products "İsıcam Sinerji" and "İsıcam Konfor", significant amounts of energy saving is possible. In Turkey, 47% of residential buildings are still using single glass glazed windows while 50% has only double glazing units. Replacing all windows of the residential buildings with "İsıcam Sinerji" and "İsıcam Konfor" would result in approximately USD 2.5 billion savings in energy costs. Turkey can build 900 schools, 300 hospitals, 550 dormitories or 75,000 residential buildings every year with the energy losses caused by single glass glazed windows or standard double glazing units every year.

Additionally, 27.5 million trees are needed to filter the CO₂ emissions caused by single glass glazed windows or standard double glazing units. In other words, every year 27.5 million trees are owed to the nature.



REPLACING ALL WINDOWS OF THE RESIDENTIAL BUILDINGS WITH "İSICAM SİNERJİ" AND "İSICAM KONFOR" WOULD RESULT IN APPROXIMATELY USD 2.5 BILLION SAVINGS IN ENERGY COSTS.



İLBANK PROJECT - İSTANBUL



TURKEY CAN BUILD 900 SCHOOLS, 300 HOSPITALS, 550 DORMITORIES OR 75,000 RESIDENTIAL BUILDINGS EVERY YEAR WITH THE ENERGY LOSSES CAUSED BY SINGLE GLASS GLAZED WINDOWS OR STANDARD DOUBLE GLAZING UNITS EVERY YEAR.

ISICAM SINERJI (LOW-E COATED DOUBLE GLAZING UNIT)

Isicam Sinerji is the brand of Şişecam Flat Glass's double glazing unit which is manufactured with Low-E glass. Without sacrificing from transparency

and natural day light, keeps the heat inside in winters, reduces heat losses 50% compared to double glazing units, and reduces fuel consumption.



BEYOĞLU LOOK - İSTANBUL

ISICAM KONFOR (SOLAR CONTROL LOW-E COATED DOUBLE GLAZING UNIT)

Isicam Konfor is the brand of Şişecam Flat Glass's double glazing unit which is manufactured with Solar Control Low-E glass. In addition to Isicam Sinerji's advantages, it reduces heat transmission from sun during summer by 40% when compared to standard double glazing, reduces fuel consumption during winter and also saves from cooling charges in summer.



İZPARK PROJECT - İSTANBUL



NAZ HOTEL - İSTANBUL

SOLAR CONTROL GLASS (DOUBLE GLAZING UNIT WITH ŞİŞECAM TENTESOL AND TENTESOL TITANIUM GLASS)

Solar Control Glass restrains the excess luminosity of the sun, controls transmission of solar energy inside and reduces cooling expenses. Şişecam Flat Glass's Solar Control Glass Tentesol and Tentesol Titanium

have various colours and performances. Isıcam units where solar control glass and Low-E coated glass used together, reduce heat losses and provide energy efficient glazing.

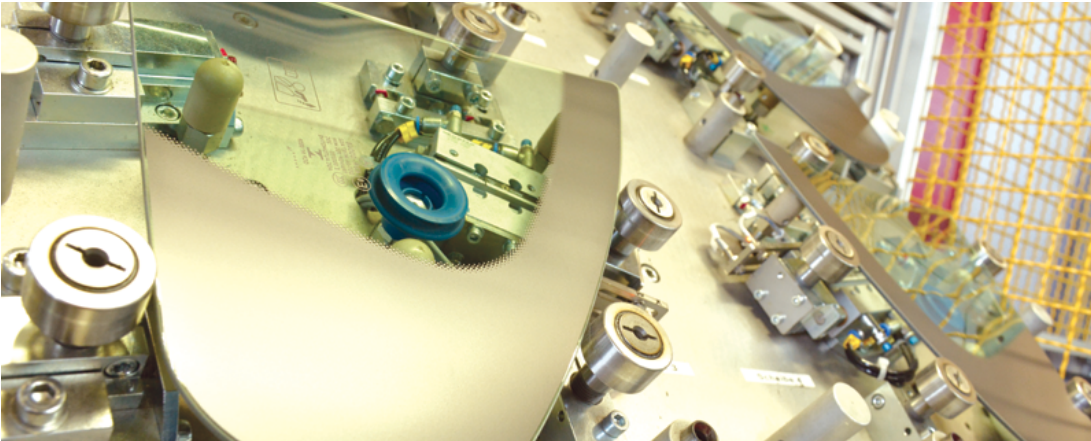


ECLIPSE MASLAK - İSTANBUL

SOLAR CONTROL GLASS IN AUTOGLASS

It should be noted that the use of air conditioning in vehicles can generate up to 20% extra fuel consumption. Glazing with advanced solar control properties substantially reduces heat build-up inside

vehicles and reduces the need for air conditioning and in turn helps to minimize the load on the unit. It has the potential to improve overall fuel consumption efficiency by 2%, and in some cases up to 4%.





CASE STUDY: Benefits of Isicam Sinerji (Low-E Coated DGU) and Isicam Konfor (Solar Low-E Coated DGU)

Isicam brand with its expanding and value added products, enriches users lives every day. On one hand benefiting from natural light Isicam creates bright interiors, while saving energy and increasing the quality of life for public. For the last 40 years, approximately 130 million m² of Isicam has been manufactured while Isicam Sinerji and Isicam Konfor had saved about USD 9 billion heating expenses starting with the production of high performance coated glass after 1995.

By using energy efficient products "Isicam Sinerji" and "Isicam Konfor", significant amounts of energy savings are possible. In Turkey, 47% of residential buildings are still using single glass glazed windows. Only 3% of houses have energy efficient double glazing units. Replacing all windows of the residential buildings with "Isicam Sinerji" and "Isicam Konfor" would result in approximately USD 2.5 billion savings in energy costs.

For example; Replacing single glass glazed windows with Isicam Sinerji/Konfor in a house in Ankara;

- ◆ Contributes two oak trees to nature by decreasing 648 kg CO₂ emissions annually.



Again in Ankara in a new or existing house; replacing standard double glazing units with Isicam Sinerji/Konfor;

- ◆ Contributes one oak tree to nature by decreasing 197 kg CO₂ emissions annually.



Şişecam Flat Glass, in accordance with its vision, is keeping on adding environmental, green, sustainable, energy saving products to Isicam Brand. In 2013, triple glazing units "Isicam Sinerji 3+" and "Isicam Konfor 3+" joined to the family. These products provide heat insulation 4 times better than standard double glazing units and about 2 times more than Isicam Sinerji and Isicam Konfor when compared. Additionally, they reduce solar heat transmission by 48% when compared to standard double glazing unit.

On the other hand, Şişecam Flat Glass, with the goal of continuous development and innovation for energy savings and environmental protection introduced the following products to the market:

- ◆ In 2013, Isıcam Konfor T, which is temperable and provides energy savings with heat and solar control.
- ◆ In 2014, Isıcam Sinerji T, which is temperable and provides energy savings with heat control.

Isıcam Konfor 62/44 T; with its high light transmittance, allows maximum benefit from sunlight for projects and also cuts cooling costs in the summer by reducing heat entrance by 40%.

Isıcam Konfor 50/33 T: Offers solutions for LEED (Leadership in Energy and Environmental Design) and BREEAM (Building Research Establishment Environmental Assessment Methodology) green building certified projects with optimum light transmission and reduced heat entrance.

Isıcam Konfor T, which is favoured in residences, commercial buildings, skylight and winter gardens, offers yearlong comfortable living areas and provides savings from heating and cooling expenses. Also because it is temperable it provides safety requirements for the projects.

Isıcam Sinerji T, with its low reflective coating and transparent look, in addition to its heat insulation advantages, offers maximum benefits from sunlight. Because it decreases the need for artificial illumination, lowers electricity expenses, too.

Today, Şişecam Flat Glass offers 10 years of warranty against all kinds of production defects on energy efficient double glazing units (Isıcam, Isıcam Sinerji, Isıcam Konfor) with its widespread and high quality Isıcam Authorized Producers network. There were 750 audits in 2014 to ensure that all Isıcam Authorized Producers meet high quality standards and deliver high quality products to end-users.

In addition to these, Şişecam Flat Glass launched “Glass Academy” to provide education to public and private sector professionals about energy saving products in new housing or commercial building projects. Besides sector professionals, Şişecam Flat Glass aims to educate end-users with advertorials, brochures



ERKE GREEN ACADEMY - İSTANBUL

and various events. Şişecam Flat Glass also organized “Isıcam Konfor Savings Academy” for children and educated future buyers to create awareness about the importance of energy saving and heat insulation starting from 2013 and continued these activities in 2014.

Sustainable Transportation

Glass is one of the most important aspects of vehicles and the technologic developments in automotive are affecting glass as well.

Glasses now define the structural, mechanical, aesthetic

Studies on Reducing Vehicular Weight

Increased importance and proportion of glass in vehicular design resulted in studies on glass for fuel and energy savings.

In parallel to the initiatives for weight reduction in the

Privacy Glass in Vehicular

Largest heat and light permeability is provided by glass. Controlling these parameters results in reduction of air conditioning, resulting in increased fuel efficiency and reduced CO₂ emissions.

The Şişecam Flat Glass Privacy option, which can be used in side doors, quarter glass and backlite offer

SPECIALTY GLASS FOR BUILDINGS

Noise Control Glass

The increase in the level of urbanization causes sound and noise pollution. The noise pollution caused by the cars, traffic and airplane departures have significant effects on the human physiology and psychology. From a physiological aspect, such effects can be listed as hearing loss, hypertension, cardiac diseases etc.; and from a psychological aspect, they can be listed as stress, insomnia, anxiety, and poor concentration. With the Şişecam Acoustic Laminated Glass the outdoor noise level can be lowered down to the level of a quiet atmosphere, and thus the quality of life is improved for the individuals.

Şişecam Acoustic Laminated Glass

Şişecam Acoustic Laminated Glass Şişecam Acoustic Laminated Glass is produced by combining two panels of glass with a sound absorbing polyvinyl butyral (PVB) interlayer under heat and pressure. When combined with different types of glasses in insulating glass units, sound insulating properties is improved and solar control, heat control properties can be provided as well. Besides providing sound insulation, Şişecam Acoustic Laminated Glass is a safety & security glass offering the properties of Şişecam Laminated Glass.

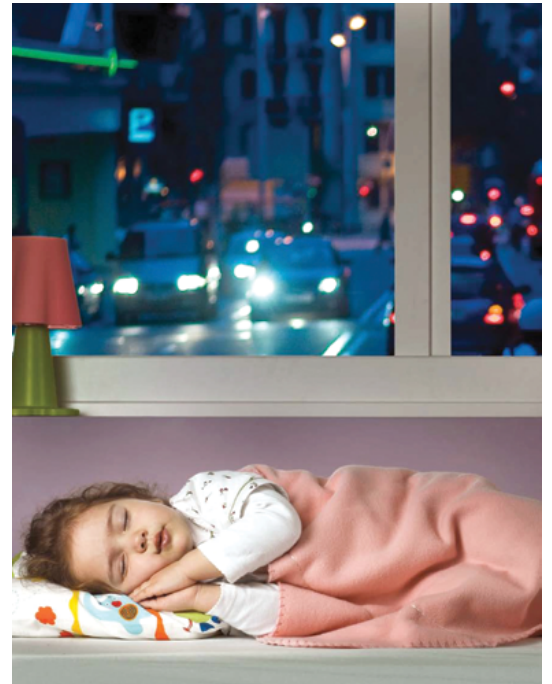
as well as environmental quality and performance of vehicles. Today, the glassing area is increased substantially, increasing the montage parts added to glass. Expectations on automotive glasses increases.

automotive sector, studies in automotive glass started to focus on thinning.

The success on thinning front glass is going to be carried forward with continued R&D work.

reduced heat and privacy and provides travellers with a comfortable vehicle experience. With thinning studies in front glass thickness, reduction in overall weight of the vehicle and fuel savings are realized. Laminated glasses which reduce UV light permeability by 99%, reduces the wear and tear of interior materials significantly.

“STOP NOISE POLLUTION WITH NOISE CONTROL GLASS.”



Safety, Security and Glass

Glass is a fragile material and standard float glass has low tolerance to impacts. By increasing thickness of the glass, tolerance for the impact will augment but will not eliminate risks caused by glass breakage. By applying secondary processes to glass, safety and security can be provided where risks associated with broken glass can be reduced, people and goods can be protected against accidental impacts or attacks. Şişecam Flat Glass produces laminated safety and security glass (Şişecam Laminated Glass) and provides safety and security solutions for all safety levels.

Şişecam Laminated Glass is Şişecam Flat Glass's safety and security glass and minimizes the risks caused by the broken glasses as it tends to keep splinters in place, prevents injuries caused by broken glasses besides protecting life and property from any external attacks, prevents/delays break-ins and attacks by sticks and stones regarding to thickness of glass and magnitude of attack, contributes to sound insulation, reduces Ultra Violet radiation which causes colour fade on fabric and objects by 97%-99%, can be used also in double glazing for heat insulation.

Therefore architects are able to design floor-to-ceiling glass surfaces (large glass surfaces) with using safety and security glass. Using safety and security glass is an effective design measure that promotes low risk, safe and secure use of the building which is an important aspect of green building design.



ECOLOGICAL MIRROR FOR DECORATIVE SOLUTIONS

We continue adopting processes for the minimization of emissions and waste generation in all our products. Our eco-friendly Flotal E mirror brand is a very strong evidence of this approach. It has a completely lead-free

top coat and less than 0.5% wet base coat. The usage of lead-free paint in mirror production cuts waste, as evidenced by Flotal E's dramatic wastewater reduction and drop in sludge generation by up to 40%.

“MEETS ALL THE SAFETY LEVELS.”





**MAXIMUM
SOLAR ENERGY WITH
ŞİŞECAM FLAT GLASS.**

SOLAR GLASS

As a result of the increasing environmental pollution and decreasing conventional energy supply resources, renewable energy sources can be used to produce electricity with fewer environmental impacts. It is possible to generate electricity from renewable energy sources without producing CO₂, the leading cause of global warming.

Turkey, thanks to its ideal geography, has a great potential for one of the most important renewable energy sources; solar energy.

Solar energy is widely utilized to generate electricity via photovoltaic effects of photovoltaic panels and produce hot water via solar thermal collectors. Solar thermal collectors and photovoltaic panels do not require any additional energy source other than daylight to transform energy.

The top layer of solar energy systems are made of glass, which protects the internal parts of solar thermal collectors and photovoltaic panels from environmental

effects. Also, its high heat and light transmittance value directly affects the efficiency of solar energy systems.

With the increased demand for high performance solar energy systems, our company, since 2003, has been producing and supplying high transparency and low iron solar glass to leading solar thermal collector and photovoltaic panel producers in the world.

In order to obtain higher transparency values of glass, anti-reflective coatings is applied on the glass surface to capture more light and therefore boost solar panel efficiency. Additional research and development activities are conducted accordingly to produce new products.

Acting in accordance with the guiding principles for social and environmental responsibility, Şişecam Flat Glass supports awareness raising activities towards promoting use of solar energy rather than fossil fuels, aiming for a green environment for future generations by reducing carbon emissions.



MARKETING STRATEGIES ON SUSTAINABILITY

Communication with distribution channels, decision makers, professionals, the public sector and consumers is continuously improved in order to increase awareness of sustainable glass products.

PROFESSIONALS (ARCHITECTS, ENGINEERS, CONTRACTORS, FACADE CONSULTANTS)

- ◆ Şişecam Flat Glass attends “Construction Sector Meetings” organized by Turkish Association of Architects in Private Practise (TAAPP), contributing to sectorial collaboration by exchanging information with all sides of the sector.
- ◆ Sector professionals’ offices are visited and lectures are given about sustainable products. Approximately 2900 sector professionals were educated about sustainable glass products in 2014. (İstanbul, Antalya, Bodrum, Bursa, Alanya, Ankara etc.- LEED Seminars)
- ◆ Conferences emphasizing the importance of glass in architecture are organized. (Reflections from Glass, Transparency Meetings)
 - “Reflections from Glass” are a chain of inspirational meetings organized by Şişecam Flat Glass where architects and engineers who are experts of their sectors share their designs and ideas on glass with architects, engineers, students and façade consultants. Architects Cengiz Bektaş, Yeşim Hatırlı, Boran Ekinci and Ali Osman Öztürk were the quest speakers in the 2nd Reflections from Glass organization in 2014.
 - ‘T Meetings’, which are organized by Şişecam Flat Glass with the “Transparent Face of Architecture” slogan, were organized in İş Sanat Culture Center in December 11, 2014 with the participation of world-famous architect Sou Fujimoto and 850 sector participants.



ŞİŞECAM FLAT GLASS
OFFERED CONSULTING FOR
350
PROJECTS IN 2014.

Glass Consulting

2014 with Şişecam Flat Glass’ experienced team, Şişecam Flat Glass started offering pro-bono “Glass Consulting” to decision makers like architects, façade consultants, investors and contractors for the selection of right glass for optimum heating/cooling and energy savings in their projects. Şişecam Flat Glass

is offering solutions on a project-by-project basis, calculating static, thermal breakage and acoustic and spectrophotometric performance; preparing glass specification proposals and providing samples/mock-ups for projects. We offered consulting for 350 projects in 2014.



Our Environmental Approach

- ◆ Environmental and Energy Policy
- ◆ Environmental Management System
- ◆ Environmental Compliance
- ◆ Energy Management and Performance
- ◆ Greenhouse Gas (GHG) Emissions
- ◆ Waste Management
- ◆ Water Management

Environmental protection requires a constant commitment to robust policies and continuous action. Şişecam Flat Glass's objective is to minimise our impact across all business activities with zero environmental incidents. Şişecam Flat Glass and all the companies within Şişecam Group are strongly aware of their responsibilities towards the protection of the environment and believe in the need to maintain the world as a liveable place for next generations. This approach is considered as the cornerstone of Şişecam Flat Glass' strategic management and is integrated in every phase of its work processes. Our aim is to carry out all environmental protection activities in Şişecam Flat Glass within a framework of an Environmental Management System, by taking account the sustainability principles and continuously improve the system with the support of all our employees and stakeholders.

In striving to protect the environment and manage our environmental impact, we are guided by legal requirements, Şişecam standards, and industrial practices. Moreover, we listen to our stakeholders, and we do our best to satisfy their expectations regarding minimizing our environmental impact. More detailed information on our approach is available on the section on stakeholder engagement in this report. In all of our operations in Turkey we have established environmental management systems in order to monitor and improve our environmental performance. We are continually working at raising environmental awareness in our workplace and provide regular training to our employees on environmental issues.

ENVIRONMENTAL AND ENERGY POLICY

Şişecam Group has Environmental and Energy Policy that covers all of its operations in Turkey and internationally and is shown in the following section. Indeed, a key element of our sustainability success to date has been that our Environmental and Energy Policy is embedded in every phase of our work

processes and environmental and energy management systems have been implemented in all our facilities in Turkey. Our approach is focussed on our most material environmental impacts, which include energy, emissions and solid waste.

As a result, our efforts are centred on the following areas:

- ◆ Manufacturing techniques with reduced environmental effects
- ◆ Improvement of energy efficiency projects to increase climate change mitigation efforts
- ◆ Expansion of waste recovery and recycling
- ◆ Evaluation of fuel and raw material alternatives
- ◆ Responsible energy and resource management
- ◆ Use of natural gas whenever available and development of furnace designs to reduce emissions and environmental risks
- ◆ Treatment of wastewater and consider recycling opportunities

The following figure shows the Environmental and Energy Policy that is officially in effect in all Şişecam Group companies including Şişecam Flat Glass.



**ENVIRONMENTAL APPROACH
IS INTEGRATED IN EVERY
PHASE OF OUR
STRATEGIC MANAGEMENT.**



ENVIRONMENTAL AND ENERGY POLICY

Knowing that the sustainable growth, which we have placed in the main axis of our business, is only possible as long as we maintain the sustainable environmental and energy principles, we aim to:

- ◆ Use natural resources efficiently, increase recycling and recovery rates,
- ◆ Consider energy efficient and environmentally friendly technologies while creating all processes starting from the designing phase,
- ◆ Develop and implement energy efficiency projects that will have a positive impact on climate change,
- ◆ Purchase products, services and technologies that provide energy efficiency to support high performance designs,
- ◆ Perform our production activities by implementing Environment and Energy Management Systems.

In this direction we declare and undertake:

- ◆ To comply with environmental and energy related legal and other requirements in force,
- ◆ To continuously enhance and improve our environmental and energy performance,
- ◆ To take the necessary precautions to reduce or eliminate the negative environmental impacts of our activities,
- ◆ To review pre-determined objectives and targets periodically and to provide required resources to achieve these goals and objectives,
- ◆ To increase awareness by providing understanding and embracement of our policy by our shareholders.

GENERAL MANAGER

**WE CARE FOR
OUR ENVIRONMENT**



ENVIRONMENTAL MANAGEMENT SYSTEM

The aim at all Şişecam operations and activities including the Flat Glass Business is to monitor the environmental impacts and to work on improving them with the support of all our employees and stakeholders under our Environmental Management System (EMS). All group-wide activities are managed through EMS

and our entire plants in Turkey have completed the ISO 14001 EMS certification process in 2015. The Şişecam Corporate Development and Sustainability Department reports to the CEO and reviews our environmental performance seeking to implement projects at a higher level.



ALL OF OUR PLANTS ARE
CERTIFIED WITH
ISO 14001 EMS.

This management oversight illustrates how our sustainability commitments, including those linked to the environment, are embedded in Şişecam's business priorities.

- ◆ Production techniques developed for minimizing environmental impacts,
- ◆ Developing projects for the reduction of impacts of climate change,
- ◆ Waste heat energy recovery,
- ◆ Evaluating alternative fuels,
- ◆ New furnace designs with reduced environmental impacts.

We carry out all our activities and aim to carry out all our initiatives at Şişecam Flat Glass within the framework of the Environmental Management System (EMS).

Each plant has at least one environmental officer, usually an environmental engineer, who reports to the plant manager. These officers work closely with the Environmental Committees which include officers from each production unit of the plant. In each production plant, environmental issues are monitored and action plans are carried out based on the procedures established in its EMS. Additionally, the monitoring body conducts internal and sub-contractor audits, establishes preventive and corrective action plans, and at the end of each year, reviews the status of issues and evaluates opportunities for improvement.

Şişecam Flat Glass, adopting an environmentally transparent approach, is also working on its Environmental Product Declaration (EPD) process, which is the most comprehensive eco-labelling scheme. Recognized under ISO 14025, EPDs are declarations that evaluate a product or a service under categories set by ISO 14040 series life cycle assessment standards. EPDs include the basis of necessary information about the life cycle and ecological evaluation of a certain product, and used in sustainability certifications of buildings.

ENVIRONMENTAL COMPLIANCE



OUR MAIN BUSINESS APPROACH IS CENTERED ON OUR LICENSE TO OPERATE AND IN FULL COMPLIANCE WITH THE ENVIRONMENTAL LAWS AND REGULATIONS OF THE COUNTRIES WHERE WE CONDUCT BUSINESS.

Şişecam Flat Glass, as a subsidiary of Şişecam, follows the Şişecam Environmental and Energy Policy. For compliance, as highlighted in the Environmental and Energy Policy, our main approach is centered on our licence to operate and operate in full compliance with environmental laws and regulations everywhere we do business in. In this context, the practices coordinated by Şişecam are summarized below.

Şişecam Flat Glass closely follows the developments in EU environmental regulations and proactively shares its views concerning aspects related to the Group's production facilities through its memberships in relevant Institutions and associations. In addition, Şişecam plays an active role within the environmental commissions of NGOs associated with the industry at both national (Istanbul Chamber of Industry, The Union of Chambers and Stock Markets of Turkey, Association of Turkish Construction Material Producers etc.) and international (Glass Alliance Europe, European Domestic Glass Committee etc.) levels.

Operating in an energy intensive sector, Şişecam Group operations are highly sensitive to a wide range of energy and environment related risks and opportunities. Therefore, since 2011, Şişecam Group Risk Management Department has been following environmental issues and evaluating the associated potential risks and opportunities at both the company and asset level. Subsequently, with the establishment

of our Corporate Development and Sustainability Department of Şişecam Corporate, energy and environmental efficiency started to be treated in much more detailed way. In this respect, risk and opportunities affecting sustainable energy issues are considered for both new investments and existing plants.

Identification and evaluation of risks and opportunities are applied by taking into account a wide range of factors including regulatory and market drivers, potential physical effects from climate change and strategic documents driven by legislations and international agreements.

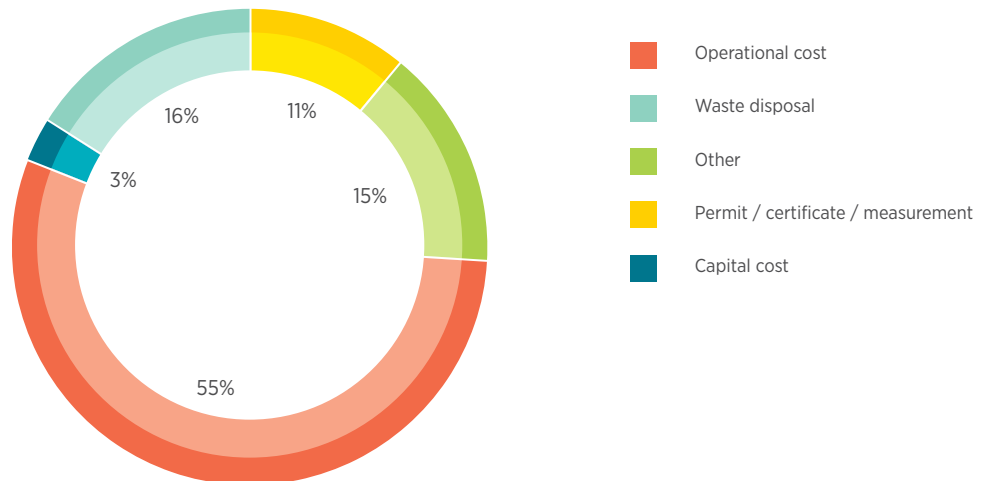
The Risk Management Department of Şişecam liaise with the related managers of the production groups to identify and prioritize the potential risks in the defined period. Criteria for determining material risks and their prioritization include current or possible regulatory requirements, energy efficiency and security, global and regional regulations, financial factors. The Environmental Management Department of Şişecam closely follows and evaluates the current and possible regulatory environment and keeps the related departments of the Group updated such as Risk Management, Finance and Investor Relations Management of developments and their potential implications.

ENVIRONMENTAL EXPENDITURES

In 2014, our total environmental expenditures was TRY 1,743,600 and mainly represented capital investments for projects and treatment plants, operational costs

of treatment plants, waste disposal, certification and measurement costs related to environmental management as shown in the following figure.

ENVIRONMENTAL EXPENDITURES BY TYPE



ENERGY MANAGEMENT AND PERFORMANCE

Our main source of energy is natural gas, which is used in glass furnaces. We also use electricity for some of our operations, and LPG. Minor amounts of

diesel are consumed for electricity generators in case of blackouts. Our total primary energy consumption amounted to 12,595,600 gigajoules (GJ) in 2014.

TOTAL ENERGY CONSUMPTION IN GJs



ENERGY SAVING PROJECTS IN 2014

Şişecam Flat Glass operates in a highly energy intensive sector. Running our operations as efficiently as possible and following industry best practices are among the key targets of our business both from an environmental and economic standpoint. Some examples of energy efficiency projects and best practices, which are run by Şişecam Energy Efficiency Department, are

LED lighting installations, high efficiency motor replacements, supply of new generation compressors, fans and pumps. ISO 50001 Energy Management System Standard and local Energy Efficiency Law of 5627 are taken as a reference point for energy surveys for the detection of energy saving potentials.

ENERGY AND CO₂ SAVINGS BY PROJECTS IN 2014

	Energy Type	Annual Savings (2014)	Unit	Estimated Annual CO ₂ Savings (tCO ₂)
All Şişecam Flat Glass Facilities	Electricity	1,877,100	kWh	900

Waste heat recovery is a very important energy saving source to Şişecam Flat Glass due to the utilization of high temperature furnaces in glass manufacturing process. Recently developed waste heat recovery projects aim to make glass manufacturing factories produce their own electricity and guarantee their electrical energy supply. This system, which is called

Organic Rankine Cycle (ORC), utilises the furnace waste heat calorific value and generates electrical power. When operating in full capacity, this electricity generation system will provide approximately half of the electrical energy demand of Şişecam Flat Glass factory in Yenışehir.

SAVINGS FROM THE WASTE HEAT RECOVERY FACILITY IN OUR YENİŞEHİR PLANT IN 2014 ARE GIVEN BELOW:

2014	Waste Heat Savings (kWh)	Waste Heat Savings (TRY)	Waste Heat Savings (TRY/kWh)
Total	28,021,500	5,235,200	0.187

GREENHOUSE GAS (GHG) EMISSIONS

Climate change is prioritised in our strategy and as one of our most material issues we measure our carbon footprint and are taking measures to reduce it. Operating in an energy intensive sector, greenhouse gas and other emissions, particularly from primary

fuel sources are a cause of concern for Şişecam Flat Glass. Şişecam Group has reported its consolidated greenhouse gas (GHG) emissions to CDP voluntarily since 2011, which includes the GHG emissions from Şişecam Flat Glass.



CASE STUDY: CDP

Şişecam Flat Glass, as a subsidiary of Şişecam, follows all Şişecam strategies in GHG emission management. Şişecam has been responding to CDP Climate Change Program, the most prominent initiative in business to combat climate change since 2011 and responded to CDP Supply Chain Program since 2012. Şişecam Flat Glass operations in Turkey are included in the scope of reporting. Under this framework, the Group reports on issues such as its climate change strategy, approach to risk management and governance, targets on energy, carbon emission and climate change and amount of carbon emissions generated from its operations. Şişecam is 1 of the 41 Turkish companies that responded to CDP in 2014. The disclosure covers the Group's glass and non-glass manufacturing facilities in Turkey and glass manufacturing facilities in Bulgaria, and it has been rated at a high level according to the score released by CDP, indicating an excellent understanding and management of the issues related to climate change.





ŞİŞECAM FLAT GLASS'S CARBON EMISSIONS IN 2014

	Raw Material Source Scope I Emissions	Fossil Fuel Sourced Scope I Emissions	Total Scope I Emissions	Scope II Emissions	Total Carbon Emissions
Total Emissions (tCO ₂)	277,600	637,000	914,600	165,800	1,080,400

Scope 1 emissions arise from a mix of raw materials and primary energy sources such as natural gas. In 2014, the only source of Scope 2 emissions was purchased electricity.

Şişecam Flat Glass has applied the widely used international conversion factors from the IPCC 5th assessment report as shown below.

CO₂ CONVERSION FACTORS

 Natural Gas <hr/> 56.1 tons CO ₂ /TJ	 Diesel <hr/> 74.1 tons CO ₂ /TJ	 LPG <hr/> 63.1 tons CO ₂ /TJ	 Electricity² <hr/> 479.93 g CO ₂ /kWh for Turkey
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² Electricity conversion factor is adopted from 2009 figure for Turkey, Greenhouse Gas Protocol Initiative.

TÜBİTAK – GHG REDUCTION PROJECT

As the most important sector representative Şişecam Group worked with the Turkish Ministry of Science, Industry and Technology and the Scientific and Technological Research Council of Turkey (TUBITAK) in 2013-2014 on a project related to the Greenhouse Gas Reduction Potential of Turkish Industry. (“An

Assessment of Technology Requirements in the Industry and Determination of Greenhouse Gas Reduction Potential within the Framework of Climate Change”). Şişecam Flat Glass, as a subsidiary of Şişecam, participated in this project.

OTHER SIGNIFICANT EMISSIONS

Due to the high energy requirement of glass production, other emissions are another material topic for Şişecam Flat Glass. In 2014, we were compliant

with our environmental compliance policy and all our emissions were below the legal limits set by the Turkish Regulation on Control of Industrial Air Pollution.

OTHER EMISSIONS

	NO _x	SO _x	Volatile organic compounds (VOC)	Particulate matter (PM)	Total Organic Carbon (TOC)
TOTAL (ton)	10,700	1,400	9	1	26

WASTE MANAGEMENT

In line with our environmental values, our main approach to curbing waste is recycling. This is apparent by the non-hazardous solid waste recycle rate of 79% that we achieved in 2014. All of our non-hazardous solid waste, with the exception of municipality/household waste, which are landfilled, is recycled. The total amount of solid waste disposed of was approximately 2,500 tons in 2014.

Recycle/ recovery rate is a bit lower at 60% for our hazardous waste. The total amount of hazardous waste disposed of was approximately 410 tons in 2014. Our factories have a special storage area for hazardous waste. Hazardous waste is separated from non-hazardous waste to increase recycling rate of the non-hazardous waste. While transferring to hazardous waste, government regulations on hazardous waste

transport procedures are followed. All the waste is handled by the licensed waste disposal companies authorized by the Ministry of Environment and Urbanization.

Şişecam Flat Glass, as a subsidiary of Şişecam, recycles packaging materials in the domestic market and is fully compliant with regulations in all markets where we operate. In 2014, 44% of the packaging materials supplied to the market in 2013 was collected and recovered. More than 700 tons of paper, cardboard, plastic and composite packaging of Şişecam Flat Glass was recycled in total. For this purpose, Şişecam made agreements with, authorized organizations, namely ÇEVKO (Foundation for Environmental Protection and Reuse of Packaging Waste) and TÜKÇEV (Consumer and Environmental Education Foundation).



ALL RECYCLABLE WASTE FROM OUR PROCESSES WAS RETURNED TO THE PRODUCTION PROCESS FROM RECYCLING PLANTS.

WATER MANAGEMENT

Water is an important issue in terms of sustainability of the glass manufacturing processes and the product quality. Şişecam Flat Glass policy is based on consuming less water and protecting groundwater resources. Water is used in production areas for cooling the equipment and cleaning the glass surfaces. Water is also used for the steam production and waste heat recovery by electricity generation facility as well. Water is supplied from groundwater sources. It is

treated in order to achieve the process standards and transferred to process water pipeline. Sanitary water is also used at the plants.

The wastewater (from both sanitary and process usage) transferred to water treatment facilities. In addition, treated wastewater discharged to predefined medium according to the standards of wastewater which is determined by the government authorities.

TOTAL WATER WITHDRAWAL BY SOURCE, TOTAL RECYCLED AND REUSED WATER

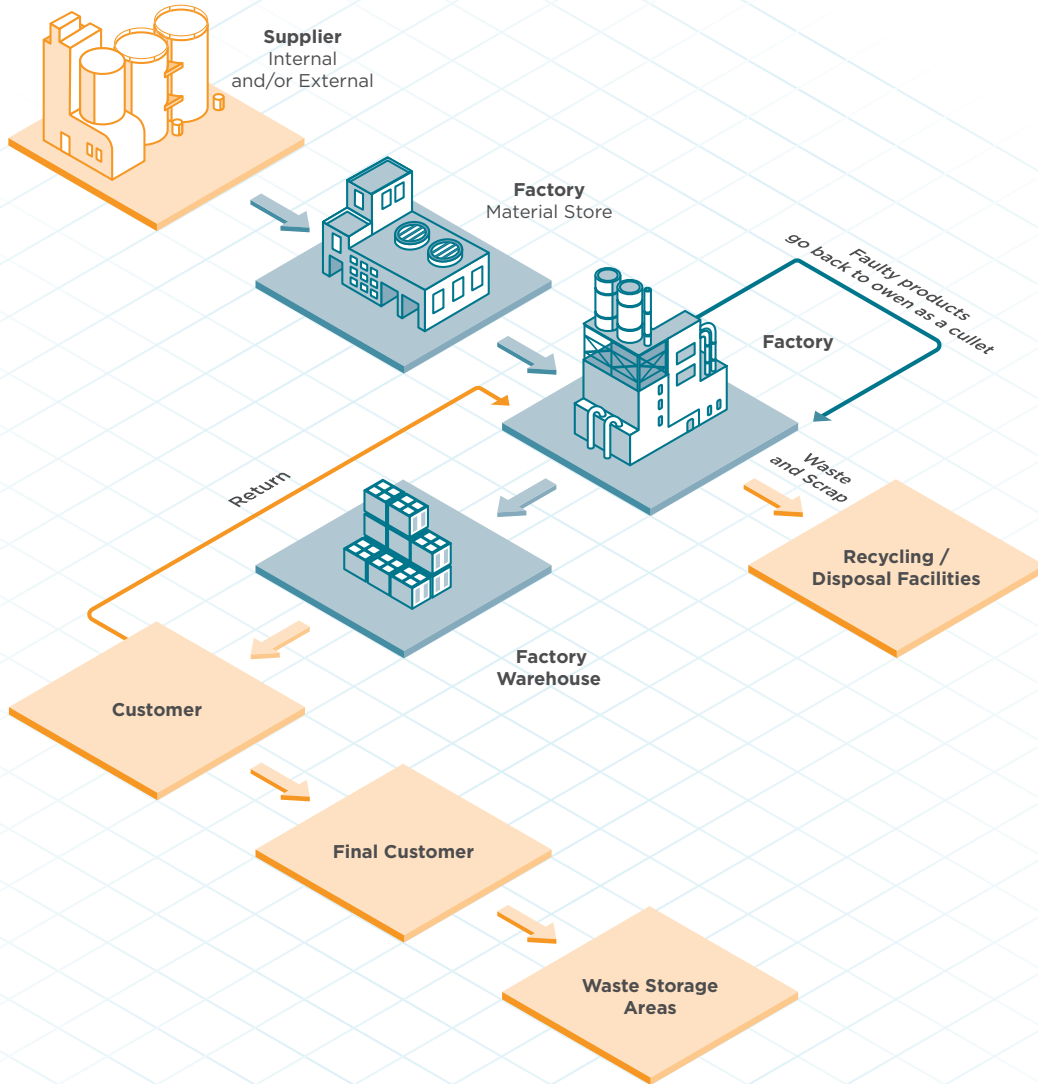
SOURCE OF WATER	Municipal water supplies or other water utilities	Ground water	Total	Recycled/ reused water
TOTAL (m³)	725,000	1,665,000	2,390,000	190,000



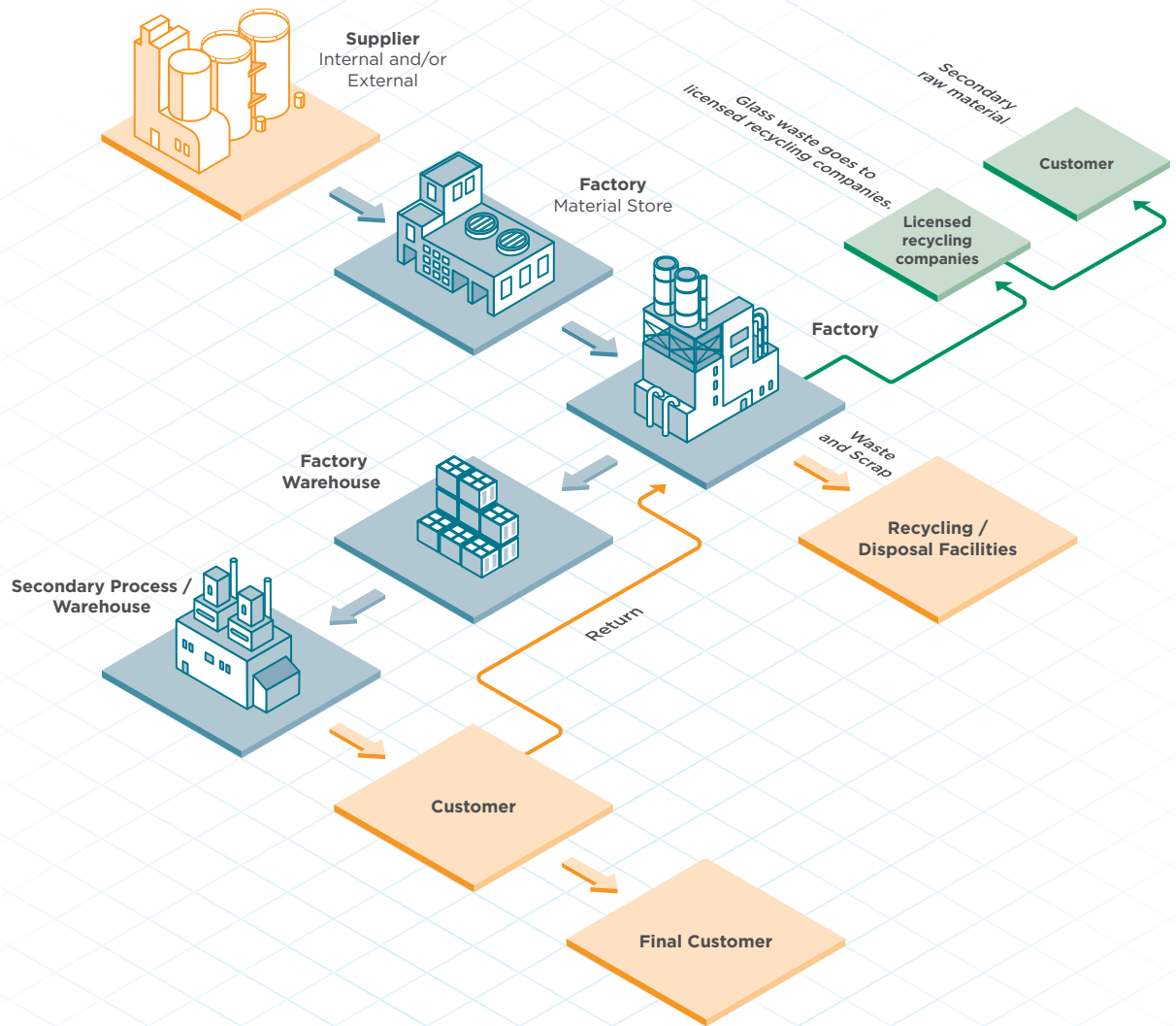
Supply Chain

- ◆ Best Practise Projects in Supply Chain
- ◆ Sustainable Raw Material and Energy Supply

ŞİŞECAM FLAT GLASS (FLAT GLASS / LAMINATED GLASS / MIRROR PRODUCTION)



ŞİŞECAM FLAT GLASS (AUTOMOTIVE GLASS PRODUCTION)



After the supply chain reorganization, the Supply Chain Directorate was established in the beginning of 2014 and in addition to domestic and international logistics departments, other supply chain units were implemented to main Supply Chain Directorate. Demand Planning Management, Purchasing Management, Supply Chain Development Management were integrated to divide business units to control the supply chain more efficiently.

Before the establishment of the Supply Chain Directorate, each factory's own managements were responsible for purchasing all materials regarding

production such as raw materials, packaging materials, spare parts etc. Today, the Purchasing Department's responsibilities are making contracts, preparing the confirmations and purchasing materials.

Besides this, Demand Planning Department was established to make the connection between Sales and Production Operations. In addition, Supply Chain Development department was established to monitor the supply chain Projects including inbound and outbound processes and make the innovations to improve the effectiveness of supply chain organization and processes.

BEST PRACTICE PROJECTS IN SUPPLY CHAIN

SUPPLY CHAIN COCKPIT PROJECT

Şişecam Flat Glass, as a subsidiary of Şişecam, plays an important role in supply chain projects managed by Şişecam.

Supply Chain Cockpit System is an ERP (enterprise resource planning) integrated online system that enables the display and analysis of Şişecam Businesses' (Flat Glass, Glassware, Glass Packaging and Chemicals) supply chain costs such as logistics, warehouse, foreign trade and labour costs. Şişecam Flat Glass uses this approach to optimize its supply chain. All Groups' Supply Chain parties determined SCOR® (Supply Chain Operations Reference) based performance metrics and applied them to the Cockpit platform.

The project aimed to bring benefits to Production Groups by reducing excessive costs and increasing communication between Groups as well as centralization. As a result, a more accessible, visible and integrated platform has been created. The ability to overview 4 Businesses' supply chain costs reveals Şişecam's position in working towards a more centralized future.

The first facility of the Cockpit System soon became visible. Since all logistics costs can be monitored instantaneously and in detail, all the hidden supply chain costs can be easily revealed. As an outcome of the Supply Chain KPI Cockpit Project, the opportunity of Centralized Transportation on some routes is taken. According to this opportunity, Şişecam Group derived a remarkable profit in 2014 by reducing logistics costs.

ŞİŞECAM NETWORK OPTIMIZATION

The objective of this project, managed by Şişecam Group, is to design a strategic network with minimized logistics costs, which satisfies customer service levels during distribution and production operations executed by the Group companies. In this project, which covers raw materials, packaged materials, semi-finished and finished goods flows, all transportation models were simulated both individually and collectively as railroad, maritime and intermodal scenarios.

To sustain outcomes of the Network Optimization, according to suitable routes that determined as a result of the project, railroad and maritime transportation prices are evaluated periodically in order to seize price advantages.

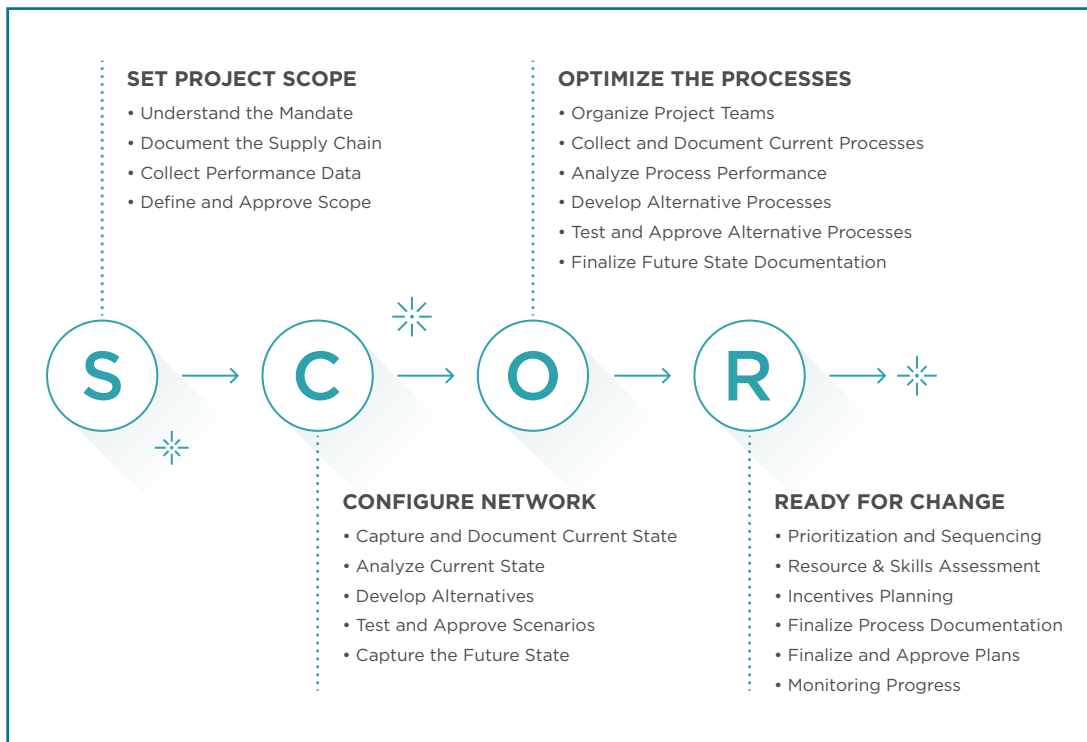
Warehouse size and locations were also analysed in depth to minimize cost and CO₂ emissions caused by unnecessary movements.

SCOR® PROJECT

Şişecam Group has implemented SCOR® - Supply Chain Operations Reference model into practice for all of its subsidiary companies including Şişecam Flat Glass in 2014. SCOR® is a comprehensive set of framework organizing business processes, performance metrics, practices and people skills. All relevant Şişecam Group's supply chain process owners went through an intensive SCOR training held by the creator of the framework SCC, Supply Chain Council, which is one of the world's largest unbiased non-profit supply chain organizations that improves supply chains through research, benchmarking, and publications. Business leaders, academia and global enterprises gain valuable insights, information and actionable data through SCC's unrivalled supply chain network, frameworks and resources. SCOR model is not only a globally accepted structure and guideline for process management

system but also a diverse compilation of best practices. The model itself leads the business processes and all fields of application to a better working and more effective operation.

One of the first projects managed according to SCOR methodology, aimed to decrease procurement and inventory costs and reduce procurement lead times. All procurement and inventory related SCOR techniques were reviewed and applied to achieve the project goals. The process analyses, defining performance metrics and project structure were operated according to SCOR framework, which resulted in leaner and more efficient procurement processes. With the help of the new methodology, reduced lead times and remarkable gains on inventory levels were obtained successfully in a very short period.



CUSTOMER PRIVACY

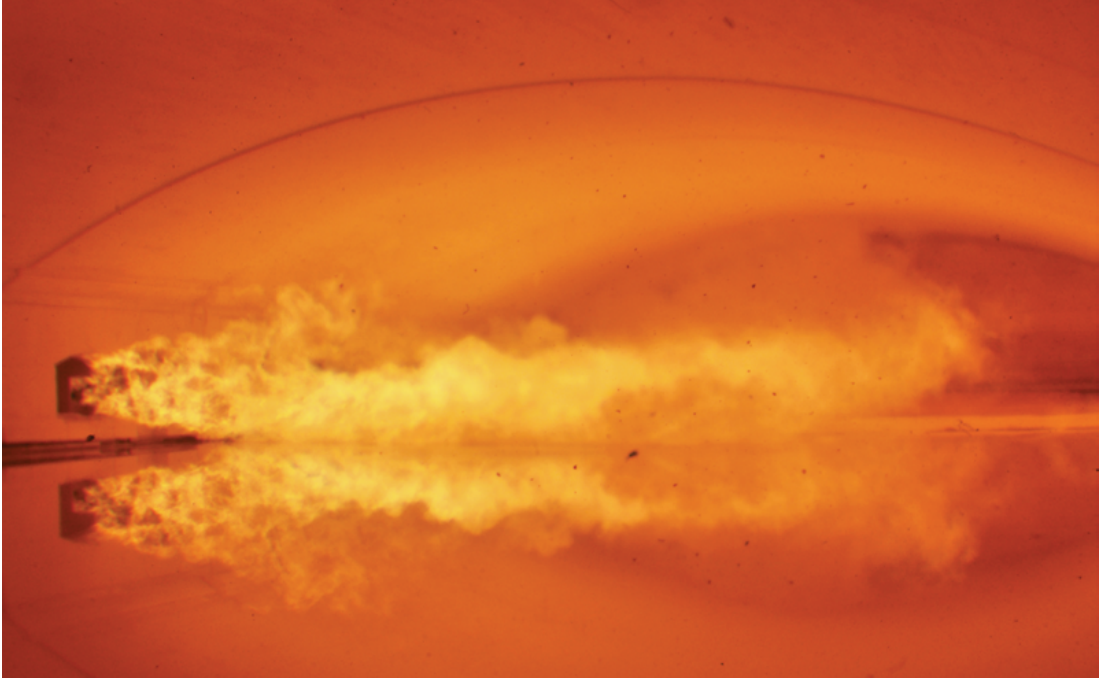
As an international supplier of flat glass and auto glass, customer privacy is very important to the Şişecam Flat Glass. All agreements with customers require non-disclosure agreements which are signed beforehand during the tender stage.

Non-disclosure agreements are also signed during coordinated projects with clients to protect the details of our know-how and sales operations. Data from

Şişecam Flat Glass design processes can never be shared with third parties, and this is also covered by agreements. In addition, every personnel hired by the Şişecam Flat Glass signs an agreement as a part of their contract to prevent data sharing with third parties.

In 2014, there were no substantiated complaints concerning breaches of customer privacy.

SUSTAINABLE RAW MATERIAL AND ENERGY SUPPLY



SUSTAINABLE RAW MATERIAL SUPPLY

The primary mission of the Soda San. A.Ş. and Mining Companies of Şişecam, which operate within the Şişecam Chemicals in Turkey and abroad, is to plan and supply the raw material requirements of Şişecam's glass and factories in accordance with medium and long term development strategies and raw material resources and maintain sustainable production.

Camiş Madencilik A.Ş., a subsidiary of Şişecam Group, was established in 1988 and aims to supply raw materials to Şişecam's glass and fiber glass plants. The mining activities of Şişecam Group actually started with its first glass production where the first mining licence was obtained in Yalıköy - İstanbul in 1932. For many years, the mining activities of the company have been carried out as a strategic business of Şişecam and were brought together under Camiş Madencilik A.Ş. in 1988. Camiş Madencilik A.Ş has 19 plants in Turkey, 10 of which are processing plants with a capacity of 3.1

million tons of end product and 9 of which are crushing and screening plants with a capacity of 4.2 million tons, in ceramic, glass and fiber glass quality raw materials.

Soda San. A.Ş., a subsidiary of Şişecam Group, was founded in 1969 to produce soda, one of the main raw materials of the glass industry. Soda Sanayii is a reliable supplier with a large manufacturing capacity, high product quality, and an extensive marketing network, which not only supplies Turkey's demand but has a strong position in international markets. The Company is continuously improving its production technologies and is able to draw on Şişecam's expertise in R&D activities of more than 30 years. Soda Sanayii A.Ş. is focussed on developing products with high added value (for more information please see the 2014 Sustainability Report and 2014 Annual Report of Soda Sanayii A.Ş.).

SUSTAINABLE ENERGY SUPPLY

Glass manufacturing is an energy intensive process, involving the melting of raw materials at high temperatures. In order to establish and stabilize the high temperature requirement in the glass furnaces, the constant feed of high capacity energy is a necessity. Thus, energy supply and costs become issues of utmost importance, in terms of sustainability.

Şişecam Enerji A.Ş. specializes in the Turkish Energy Market. Operating as Şişecam's energy headquarters, Şişecam Enerji A.Ş. seeks to supply the lowest electricity and natural gas costs to Şişecam Group; through providing its own energy at hand or dealing with other energy suppliers in the business to meet the demand. In addition, Şişecam Enerji A.Ş. aims for long-term, risk free dealings for Şişecam Group.



Innovation

- ◆ Research and Technological Development

RESEARCH AND TECHNOLOGICAL DEVELOPMENT

Şişecam Flat Glass, as a subsidiary of Şişecam, collaborates with the Science and Technology Centre for research and development projects.

Şişecam Group's R&TD (research and technological development) activities are carried out by both central and the individual manufacturing groups with a broad perspective at the corporate level with; acknowledgement of common approach, recollection and methodology and the added value increases with the recognition of collective knowledge, skills, competence, infrastructure and hardware, productivity and efficiency.

Şişecam Flat Glass started using lead free paints in tram/degrade/brand and silver print chemicals. Complying with the 2000/53/EC ELV directive, lead-free solders are going to be utilised in 2015. In line with the same directive, chromium⁶⁺, mercury and cadmium are banned and not used in Şişecam Flat Glass products. Our suppliers are requested to provide sub-components, works in progress and products following the same directives.

We are committed to the safety of our products and to ensuring they can be effectively handled, fitted and used by our customers. Our product risk review procedures are designed to identify risks and to provide advice to users on safe handling. We communicate

these risks through safety data sheets, labels, and Glazing and Handling Guidelines.

Şişecam Flat Glass, "Glass Processing Guides" for different glass types, "Isıcam Installation Manual", "Mirror Application Handbook" were prepared and distributed to all the sector professionals who are related.

Furthermore, for the right glass solutions, for the right places, Şişecam Flat Glass has always been to increase public awareness. Therefore, "safety, security and noise control glass usage in the schools" and "mirror and glass application hand book for furniture" and "Isıcam hand book" were prepared and distributed.

"Glass Solutions in Green Buildings" booklet-which is easy-to-use reference document that provides information on "how to use the right glass", is being prepared.

Today, Şişecam Flat Glass offers 10 years of warranty against all kinds of production defects on energy efficient double glazing units (Isıcam, Isıcam Sinerji, Isıcam Konfor) with its widespread and high quality Isıcam Authorized Producers network. There were 750 audits in 2014 to ensure that all Isıcam Authorized Producers meet high quality standards and deliver high quality products to end-users.



TO ENSURE A SUSTAINABLE FUTURE, WE ATTACH IMPORTANCE TO CONTINUITY OF INTELLECTUAL PROPERTY.



SUSTAINABLE PRODUCTS

As the usage of energy-efficient materials in the architecture, automotive and energy sectors has steadily increased, Şişecam develops glass products that provide optimum solutions to heating, cooling, lighting and renewables for diverse climate zones.

- ◆ Through laboratory and pilot-scale studies; a new generation of high-performance temperable heat and solar control glass products which improve energy efficiency and reduce CO₂ emissions, were included in Şişecam Flat Glass's product portfolio.
- ◆ Temperable low-e 70/50 performance product, which is compliant with the layer configuration of Şişecam Temperable Solar Control Low-E Glass Neutral 62/44 product, was included in the product portfolio of Bulgaria Coating Line.
- ◆ Furthermore, the coated product for architectural applications having a performance in the 70/40 range has been developed in the laboratory, and designed to be manufactured at the Trakya Glass Bulgaria EAD.
- ◆ Bendable coating was developed for heated athermic, laminated windshields for cars, which acquired the performance capability expected by the automotive industry.
- ◆ Electrochromic and thermochromic glasses serve as another great opportunity for Şişecam to introduce energy-saving breakthroughs in the market. Within the scope of the project supported by TEYDEB (Technology and Innovation Funding Programs Directorate) electrochromic window systems that act as a dynamic filter and control for heat and light is being developed. From the international inorganic thermochromics-organic electrochromic project carried out with Washington University (U.S.A.) and in cooperation with TÜBİTAK-NSF a triple co-sputter coating device that will blend different materials and add a thermochromic feature, as well as the infrastructure that can measure optical changes under heat exposure has been gained, and thus a fully-equipped laboratory which possesses coating and measurement capabilities has been put into service through these two projects.
- ◆ In addition to the new coated products, new products offering different optical performances and colors were designed, manufactured, and supplied to the market for architectural and automotive applications through batch coloring. One of these products is the deep smoke-colored privacy glass designed for the automotive industry which improves cooling efficiency by providing solar control and a patent application was filed.



RENEWABLES

Şişecam focuses on innovative products that enhance the usage of renewables.

- ◆ The project funded by the Turkish Ministry of Science, Industry and Technology and conducted in collaboration with GÜNAM (Middle East Technical University Centre for Solar Energy Research and Applications) is aimed at applying the new generation nanoscale patterned glasses to photovoltaic solar cells and the resulting technology will be introduced to the glass industry.

ENERGY EFFICIENT PRODUCTION

In relation with Şişecam Group's corporate energy strategy, R&TD projects and studies provide a significant decrease in the level of energy consumption and related GHG emissions of glass furnaces.

- ◆ Within the scope of the international collaborative project CRAFTM (Carbon Reduction by Auxiliary Firing Technique for Glass Melter), which is led by R&TD and co-executed with Şişecam Flat Glass and funded under the EU Framework Program FP-7, it has been established that there is potential for 1-2% reduction in energy and GHG emissions, 15-20% in NOx emissions based on the studies for NOx reduction and energy performance enhancement.
- ◆ Design improvements were realized at float furnaces through up-to-date implementations, and 10% improvement in energy consumption was attained at a float furnace with a capacity of 925 tons/day as compared with the Group's other furnaces.



Occupational Health and Safety

- ◆ Occupational Health and Safety Policy
- ◆ Occupational Health and Safety Management System



ANY OCCUPATIONAL ACCIDENT OR INJURY IS A SERIOUS ISSUE NOT ONLY FOR OUR COMPANY BUT ALSO FOR OUR INDUSTRY AND TO THE ECONOMY AS A WHOLE.

As an industrial group with 5 production plants and more than 2,000 employees in Turkey, Şişecam Flat Glass recognizes the magnitude of Occupational Health and Safety (OHS) to our business. Our overarching safety goal is to eliminate potential risks that could cause harm to our employees. Any occupational accident or injury is a serious issue not only for our company but also for our industry and to the economy as a whole.

Moreover, a healthy and safe working environment is also a prerequisite to helping achieve efficiency and productivity in the workplace. As such, Şişecam Flat Glass considers the design of our processes and

enhance our emergency response capabilities to minimize the risk of accidents as well as investing in new technologies and innovation to help facilitate an incident-free workplace.

Through the coordination of the Şişecam Industrial Relations Directorate, there is a focus on continuous improvement in the working environment and conditions as well as on promoting a conscious health and safety culture.

The following figure shows Şişecam Group Health and Safety Policy which is in effect in all Şişecam Group companies including Şişecam Flat Glass.





OCCUPATIONAL HEALTH AND SAFETY POLICY

We aim to achieve every stage of our operations in a safe and healthy working environment. In line with this objective, as a part of our responsibility to create healthy individuals as well as manpower, we adopt strategies

- ◆ To prevent occupational accidents and occupational diseases by determining the necessary measures to implement and be implemented,
- ◆ To make risk assessments by the participation the employees and to reach the acceptable risk levels,
- ◆ To use the safe equipment and appropriate technologies for a healthy and safe working environment,
- ◆ To ensure the participation of our stakeholders each level of the organization in the improvement of occupational health and safety practices,
- ◆ To constitute Occupational Health and Safety culture and turn it into a lifestyle.

In this direction, we declare and undertake:

- ◆ To meet the relevant standards and requirements in the field of legal obligations for Occupational Health and Safety,
- ◆ To increase our performance and our processes with a proactive approach on the continuous improvement on Occupational Health and Safety,
- ◆ To continue improving the education and activities of our employees and sub-contractors / suppliers to their employees, visitors, interns for adopting the principles of OHSAS.

GENERAL MANAGER

**WE THRIVE AND
DEVELOP TOGETHER**



OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM

Şişecam Group has set a high standard of OHS performance and formalized policies since 1989. In order to create consistency across the Group as well as comparability of performance with our peers, we strive to ensure the majority of our plants use

the Occupational Health & Safety Advisory Services (OHSAS) 18001 Standard. In Şişecam Flat Glass, we have implemented OHSAS 18001 Occupational Health and Safety Management Standards System in 100% of our production plants in Turkey.

OHS TRAINING

Şişecam believes that promoting a culture of health and safety is vital to our success in achieving our goal of reducing the incidence rate of work accidents. For

this reason, and to go beyond the legislation, Şişecam provides regular OHS training sessions to all employees that cover the following topics:

General Issues

- ◆ Information regarding labor legislation
- ◆ Legal rights and responsibilities of employees
- ◆ Commercial cleaning and layout
- ◆ Legal consequences of occupational accidents and diseases

Health Issues

- ◆ Causes of occupational disease
- ◆ Principles of disease prevention and protection techniques
- ◆ Biological and psychosocial risk factors
- ◆ First aid

Technical Issues

- ◆ Chemical, physical, ergonomic risk factors
- ◆ Manual lifting and carrying
- ◆ Flash, explosion, fire and fire protection
- ◆ Safe use of work equipment
- ◆ Work with display screen equipment
- ◆ Electricity, hazards, risks and precautions

- ◆ Implementation of the technical principles of the causes and prevention of occupational accidents
- ◆ Safety and health signs
- ◆ Use of personal protective equipment
- ◆ General rules of occupational health and safety and security culture
- ◆ Evacuation and rescue.



WE BELIEVE THAT PROMOTING A CULTURE OF HEALTH AND SAFETY IS VITAL TO OUR SUCCESS IN ACHIEVING OUR GOAL OF REDUCING THE INCIDENCE RATE OF WORK ACCIDENTS.



During 2014, all Şişecam and affiliated group employees working at Şişecam Headquarters received Basic Occupational Health and Safety Training, which was coordinated by Şişecam Group Industrial Relations Department. In addition, First Aid Teams were set up, comprising İş Towers, Information and Technology Center employees, who were provided with Basic First Aid Training. All OHS specialists working at Şişecam Group received Energy Isolation, Lock Out/Tag Out (LOTO) Systems Training. Initiated in 2013, Behaviour-Oriented Occupational Health and Safety training was given to all middle managers who are working at production plants in Şişecam, and efforts aimed at building on the OHS culture continued.

OHS RESPONSIBILITY

Project team members gave user training at the headquarters and at the plants in relation to the Occupational Accidents Analysis and Corrective/Preventive Action Tracking System, which was prepared in 2013 and to be used by end users starting from January 2014. Having gone live, the system was improved in line with the feedback received, and started to be used actively and efficiently. In line with the modified occupational accidents analysis system, the annual Occupational Health and Safety Rewarding system was revised in view of occupational accident frequency, occupational accident severity and the best practices regarding occupational health and safety at plants.

As in 2013, activities were organized at Şişecam plants in Mersin during the National Occupational Health and Safety Week in May. The theatre play themed occupational health and safety, which was specific to Şişecam culture and glass manufacturing, was staged starting from the national occupational health and

safety week, and later in the year at the Group's plants.

In addition to those, plays about OHS and Personal Protective Equipment (PPE) were put on stage, which encouraged the use of personal protective equipment and prizes were distributed to motivate the employees.

A painting competition was organized for the children of the Group's blue collar employees in a bid to point out that occupational health and safety culture is applicable not only to workplace but to life in general, and to propagate this culture socially.

A committee made up of occupational safety specialists working at Şişecam Headquarters and affiliated groups was set up to prepare an OHS handbook, which will be used at Şişecam workplaces. Addressing basic occupational health and safety topics and regulatory requirements so as to cover all production and working areas, the handbook was printed by early January 2015 and started to be handed out to employees in 2015.

MANAGERIAL REVIEW OF HEALTH AND SAFETY

Through visible leadership and engagement, we believe that we can increase our ability to mitigate health and safety risks. By conducting regular reviews and consultations between management and production plants, Şişecam Flat Glass is able to consistently monitor performance, provide any needed support for program implementation and respond to safety issues together with production plant workers.

The resulting reports that were written include: monitoring and observation of results in the plants and were shared with Şişecam Risk Management Division, Internal Audit Division and related HR Departments.

All plants of Şişecam subsidiary companies employ OHS units that comprise an Occupational Health and Safety Expert, Workplace Physician and Medical Personnel, who serve under the Plant Manager. Companies and plants carry out their own internal OHS activities and monitor their results. Also in each plant there is an OHS Committee, which includes a management representative, support units and worker representatives. All employees at each plant are represented by the members of the OHS Committee. We comply with the local law on the minimum numbers of committee representatives.

A Central OHS Expert serves as the coordinating body, providing support on OHS-related developments, including changes in regulation, training courses, meetings and special events, among others.

Additionally, the central unit carries out annual OHS measurement and monitoring activities in plants and issues reports of their results.

The current Workplace Accidents Analysis Tracking program has been improved to adapt to Şişecam's ever-evolving and changing structure, and a new Corrective & Preventive Actions (CAPA) system has been established to ensure more thorough measurement of workplace accidents.

Integrated with SAP, the CAPA system is available to all workplaces and units, including the management and sales centers and provides capabilities to track and control workplace accidents in a systematic manner.

Aside from tracking and preventive measures, these projects enable Şişecam to disclose accurate data and generate reports. This reporting protocol enables Şişecam to provide clear and transparent communications to employees and managers.

Furthermore, we formed a Workplace Accidents Evaluation Commission to reduce work-related incidents using root-cause analysis. The Commission evaluated each workplace accident caused by "Intervention to Working Machines", "Being Crushed between Two Objects" and "Glass Punctures". The Commission report containing case studies and recommendations was disseminated to our plants.

OHS PRACTICES IN ŞİŞECAM FLAT GLASS

As mentioned previously, all Şişecam Flat Glass facilities have a Health and Safety unit and all of our employees are represented in the Health and Safety

Committees. These committees are made up with at least the minimum number of representatives required by Turkish Health and Safety Law³.

2014	Number of personnel from non-management staff	Number of personnel from management
Personnel in the committee - 2014	6	1

As part of the occupational health and safety observations and measurements, OHS measurements and observations were performed at the Trakya Yenişehir Cam San. A.Ş., Trakya Cam Sanayii A.Ş. Trakya Plant and Auto Glass Plant and the Mersin Plant, Trakya Polatlı Cam San. A.Ş. affiliated to the Group, and the resulting reports were shared with relevant units in 2014.

The “Horizontal and Vertical Life Lines Applications” project’s goal was to prevent accidents by falling from roof and roof access stairs and the plant won the “Preventative Action Award” in the Occupational Health and Safety category at the Şişecam Stars Parade Ceremony.

There were many risk analysis, preventative and improvement projects in Şişecam Flat Glass plants in 2014. Some examples from these projects are; rearranging the merchandise warehouse for earthquakes at Trakya plant and horizontal and vertical life line applications on rooftops and roof access stairs at the Yenişehir plant.

In parallel to related activities, “Tracking and Preventative Action for Occupational Accidents Project” was implemented at Şişecam Flat Glass in 2014. With the help of this project, occupational accidents can be tracked and recorded much more reliably in real time, allowing rapid action on Improvement and Preventative Actions.

INJURIES AND LOST DAYS

From all Şişecam Flat Glass facilities in Turkey there were a total of 104 accidents that resulted in injury but no fatalities to either Şişecam Flat Glass employees or third-party workers. In all cases where there were injuries or near misses, investigations were undertaken

to understand the root-cause and to help avoid any further accidents. Total lost days for Şişecam Flat Glass’s workforce in Turkey were 1,041 (2013: 1,723 days).

INJURIES IN 2014

INJURIES	Male	Female	Employees	Third party workers	Total injuries	Injury Rate*
2014	81	-	81	23	104	15

* Injury rate⁴ calculated as: (Total injuries x 1,000,000) / Total worked man hours

3 The Law on Occupational Health and Safety No. 6331 (“Law No.6331”), which governs the health and safety standards to be adopted by employers in Turkey and was published on 30 June 2012.

4 The frequency of injuries relative to the total time worked by the total workforce in the reporting period.

STRONG INDUSTRIAL RELATIONS

At Şişecam Flat Glass, we respect and support our employees' right to join a union. We have relations with one trade union in various branches of businesses

under the coordination of Şişecam Group's Industrial Relations Directorate in Turkey. Our goal in our Industrial Relations Vision is:

- ◆ To increase competitiveness and efficiency by developing industrial relations in a balanced way within the framework of Group policies
- ◆ To maintain industrial harmony in the workplace based on trust and dialogue with trade unions,
- ◆ To undertake the promotion of health and safety at work in line with our "people first" philosophy.

Industrial relations at Şişecam Group are carried out with five related trade unions in three business lines, which are coordinated by the Group HR Directorate's and Şişecam Group's Industrial Relations Directorate under the Human Resources Division.

an agreement was executed following a 7-day strike. The agreement will remain in force for three years.

As a result of the negotiations on the 24th Term Şişecam Group Collective Bargaining Agreement with Trade Union for 10 workplaces affiliated to Şişecam Group,

The percentage of employees covered by our collective labor agreements was 69% in 2013 and 2014. It should be noted that, among our blue collar employees, the share of employees having joined a union was 100% as at the end of the reporting period.

REGULATION AND COORDINATION WORKS

Şişecam Group Industrial Relations Directorate has coordinated meetings to inform employees about recent changes in labor legislation and occupational health and safety regulations in 2014 as in previous years. In the coordination meetings, relevant industry updates and problems encountered were discussed as well as determining a Group approach to confront any problems.

agreements. Feedback was shared with them about the present status and operation. Collaborative meetings continued to maintain effective cooperation between the employees and the employer.

The statements about rules, legislations and regulations are continuously shared with the employees in 2014.

There were many meetings held in 2014 related to strengthening relations and communication and a peaceful working environment in the company with labour union representatives and hourly-paid employees. Additionally, there were many joint activities organized with unions other than technical meetings. The following points are examples of some of the activities:

Plant Managers for Turkish sites and HR Executives were given a training course about collective labor

- ◆ All hourly paid employees, some of them being union members, were given a company email address to strengthen relations.
- ◆ Informative news about the activities organized is screened at plant cafeterias to create a broader awareness of the company agenda and organizations amongst employees.
- ◆ There were many activities and trainings held in the Occupational Health and Safety Week, with the participation of all employees, executives from Anadolu Cam, Paşabahçe, Şişecam Flat Glass and Soda Kromsan from Mersin region and Kristal-İş and Petrol-İş Union executives.
- ◆ A protective equipment-themed painting contest was organized for employees' children.



Human Resources

- ◆ Our Workplace
- ◆ Policies and Career Advancement Programs
- ◆ Diversity and Inclusion

OUR WORKPLACE

Şişecam Flat Glass's success depends on our employees. While developing, incorporating, and retaining the best talent, the company's priority is to

provide a happy, safe and motivating workplace where our employees can develop their full potential.

Our main goals in the workplace are:

- ◆ To provide our employees with a non-discriminatory workplace that meets the standards of national and international workplace rights policies.
- ◆ To protect the rights of employees to unionize.
- ◆ To continue to be a leading company which employs only the best practices in occupational health and safety in all our workplaces.
- ◆ To provide a fair and pleasant place for our employees to work.



ONE OF OUR MAIN GOALS IN THE WORKPLACES IS TO PROVIDE OUR EMPLOYEES WITH A NON-DISCRIMINATORY WORKPLACE THAT MEETS THE STANDARDS OF NATIONAL AND INTERNATIONAL WORKPLACE RIGHTS POLICIES.



POLICIES AND CAREER ADVANCEMENT PROGRAMS



WE STRONGLY BELIEVE THAT OUR SUCCESS DEPENDS ON OUR MOST VALUABLE ASSET - OUR EMPLOYEES.

At Şişecam Flat Glass we strongly believe that our success depends on our most valuable asset - our employees. To recruit the best talent, foster a culture of innovation and generate a favourable work atmosphere, we offer competitive compensation and benefits, including educational allowance and bonuses as well as annual vacation days, parental leave and marriage leave.

Şişecam Flat Glass also conducts regular performance reviews and training sessions to help build a solid foundation for our employees. Our leadership and development programs, which are articulated in the following section, are designed to help our employees thrive, build on their existing abilities and gain new skills.

GLOBAL LEADERSHIP PROGRAM

This is a comprehensive and high-priority program that aims to build the most critical competencies for high-performance culture at the leadership level.

Intended results:

- ◆ Developing a global leader profile
- ◆ Defining required leader and employee competencies and behaviours in a high-performance culture
- ◆ Developing the communication plan for deploying the leadership model
- ◆ Designing internal competency trainings for managers and e-learning for employees.

LEARNING & DEVELOPMENT PROGRAMS

Available to all levels of white-collar and blue-collar employees in Turkey, under the umbrella of Şişecam Akademi, the common objective of these programs is to equip the participants with the right set of competencies and skills necessary to lead the organization to the realization of its strategic goals. In line with this objective, the main activities of the learning & development department can be summarized as follows: assessing the training and development needs at an individual level in terms of organizational

competencies and occupational/technical skills; managing and updating a comprehensive learning & development catalogue; selecting and customizing the appropriate learning & development tools from the right resources; monitoring the impact of the activities and engaging in corrective action when necessary through constant feedback; and introducing new and innovative topics to the organization, which in turn contributes to the development of intellectual know-how.

TRAINING

From 2015, all trainings in Şişecam will be prioritised and planned in a framework that will be defined with different schools under the Şişecam Academy Project.

In this framework, prioritised trainings are; Sales and Marketing, Supply Chain Management School, Glass School and Leadership School.

Through the internal trainer deployment program, Şişecam employees' participation in the internal training process is supported.

Apart from these, other trainings such as first aid, HSE, or financial-related can be taken in parallel to department requirements. Capacity Based Interview Techniques, Information Security Trainings, capacity development trainings after Development Center practice and similar trainings are organized during the year for support to different goals and targets of different departments. Supplier choice support continues to be provided for necessary technical training requirements and trainings are given by training and development business partners in facilities. In 2014, total training hours for employees in Turkey amounted to 55,986 man-hours.

Description	Unit	2014	2013
Management			
Male	Hours	1,264	2,548
Female		1,372	528
Total		2,636	3,076
Staff⁵			
Male	Hours	48,971	38,632
Female		4,379	3,595
Total		53,350	42,227
By Gender			
Male	Hours	50,235	41,179
Female		5,751	4,123
Total		55,986	45,302
Average training hours per male		21.80	18.38
Average training hours per female		30.60	27.13
Average training hours per employee		22.47	18.93

EMPLOYEE ENGAGEMENT

Our employees' skills, motivations and commitments to Şişecam help drive successful achievement of our goals and raise the bar for greater improvements; thus, we highly value our employees' views. As articulated in the following sections, we seek their opinions on strengths, weaknesses and opportunities in many aspects of our work environment through several mechanisms.

Şişecam Flat Glass conducts an Employee Engagement and Satisfaction Survey bi-annually, followed by a periodic Pulse Survey conducted in the year between. Based on the Survey results, action plans are developed and followed by the parties concerned. According to the results of the Survey of 2013, internal communication was determined as a focus area and there have been several new initiatives on the area since. (e.g. we developed a social club for our employees where they have the opportunity to attend a diverse range of activities across the Company.)



WE SEEK OUR EMPLOYEES' OPINIONS ON STRENGTHS, WEAKNESSES AND OPPORTUNITIES IN MANY ASPECTS OF OUR WORK ENVIRONMENT THROUGH SEVERAL MECHANISMS.

⁵ Staff defined as 'white collar employees below managerial positions'.

SUGGESTION DEVELOPMENT SYSTEM

Suggestion Development System was introduced in order to ensure the collection and appraisal of Şişecam Group employees' innovative suggestions, adding value in line with Şişecam Group strategy and objectives. This system involves approval of incoming suggestions by the Suggestion Reception Team, valuation by the Suggestion Evaluation Team, and the monitoring of the whole process in an electronic environment. The

purpose of the Suggestion Development System is to gather suggestions that add value, assess them in a reliable fashion, and implement any practicable suggestions in order to reap any financial return and/or process optimization benefits. In the scope of the Suggestion Assessment System, a total of 209 suggestions were made to the Şişecam Flat Glass.

PERFORMANCE MANAGEMENT

Responsible for expanding the success of our performance culture and increasing organizational readiness, the Performance Management System works hand in hand with the vision, mission and strategies of Şişecam Group. Started by the Group in 2010, the Balanced Score Card system is aligned with individual targets. In line with this, our success-

based performance culture is being converted into a success-based corporate culture. The purpose of the Performance Management System is to create value for employees and to ensure that the value created by employees serves the development and sustainability targets of Şişecam Flat Glass.

CAREER DEVELOPMENT

Şişecam Flat Glass offers opportunities for all employees to develop their careers through an integrated pre-planning of organizational and employee needs. Both the expectations of the individual and the requirements of the organization are addressed in the Career Development Plan, as part of the annual Performance Management System.

prepared that match the needs of the individual. There are also career opportunities for individuals to be assigned to expatriate positions within Şişecam abroad affiliates.

Moreover, strategic career maps, Group-based career and succession plans, are developed based on the data from the Performance Management System. In addition, employee competencies are reviewed at external Assessment Centers, where blue-collar and white-collar employees participate before being considered for promotion. If any development areas are identified in the process, development plans are

Performance evaluation and career development systems are in place at Şişecam for both blue-collar and white-collar staff. A regular performance and career development assessment of the preceding year is implemented for all staff without exception.

In implementing this system, managers objectively and sensitively assist the development of their staff. The employee is always informed of the results following the evaluation in what is a confidential process.

RECOGNITION & REWARD SYSTEM

Şişecam Group Employee Recognition and Reward System is the acknowledgement of an individual or team's behaviour, effort and accomplishments that support the organization's goals and values. As a

subsidiary of Şişecam Group, Şişecam Flat Glass implements all human resources policies of Şişecam Group.

THREE PROJECTS OF ŞİŞECAM FLAT GLASS RECEIVED 'STARS OF THE YEAR' AWARD AND 7 EMPLOYEES FROM THE COMPANY GRANTED THEIR AWARDS.

- ◆ Recognition: In our recognition system, Şişecam grant spot awards to our employees who have achievements and exemplary behaviours to let them know that their work is valued and appreciated. We also congratulate our employees on their special days such as birthdays, marriages and promotions to build a supportive work environment. This system has been used 2859 times in Şişecam Flat Glass in 2014.
- ◆ Reward: Şişecam has three main rewarding categories:
 - I. Stars of the Year: According to the Rewarding system at Şişecam, projects that excel in providing business-oriented solutions, such as improving the efficiency and effectiveness of Şişecam's processes and reinforcing Şişecam's brand value are granted an award in this category. Three projects of Şişecam Flat Glass received awards and 7 employees from the company granted their awards.
 - II. Occupational Health and Safety: Şişecam companies are granted an award In "Occupational Health and Safety Award" category according to their Accident Frequency Rate and Accident Severity Rate. In addition, The Best Practice in Occupational Health and Safety is selected and awarded with 'The Best Execution in Occupational Health and Safety Award' in that category.
 - III. Special Award: In "Special Award" category, employees or initiatives for cultivating positive work relations, pursuing sustainability endeavours, and developing a constructive work environment are granted an award.

ŞİMDİ! SOCIAL ACTIVITIES CLUB

In 2014, Şişecam Social Activities Club was launched to ensure that employees' time at the work place is enjoyable, for improving communication, sharing and synergistic environments and for turning employee happiness into productivity. Within this framework,

various activities and projects were realized with the support of volunteer employees from trips to theatre plays, from office parties to tournaments and from aid campaigns to discount deals.



FLEXIBLE BENEFITS

We started up the Flexible Benefits Program at the beginning of March, 2015. Flexible plans allow employees to choose the benefits they want or need from a package offered by Şişecam. Our Flexible benefit package includes variable health insurance plans for employees and their families and life insurance for this year.

EMPLOYER BRANDING

To increase the Employer Branding Image of Şişecam, we plan yearly campus activities e.g. case studies, interview simulations, tea-talks with managers, etc. Case studies include team work of students on various topics. Students try to give a solution to given situation and at the end they make a presentation about it. We plan participate in these case studies with some of our managers, so they would be able to observe students naturally. In addition, successful students may be awarded with internship opportunities, which can increase the applications to these activities as well.

The aim of Interview Simulations is for the students to experience different types of interviews, such as one-to-one and group interviews. In addition, this activity introduces students to a good type of interviewer as well as a bad interviewer. The aim of questions and the expectations behind these questions are also at the target of this activity. After the examples, the HR department gives feedback to students.

Tea-talks with managers allow students to listen and experience the managers' career paths which can enhance their point of views on different career paths.



STRUCTURED LONG-TERM INTERNSHIP PROGRAM

The long-term internship program aims to hire successful students as interns in a long-term period; so we can observe their performance as well as teaching

them our culture and the different service lines of our business.

COMMON LANGUAGE PROGRAM

The main purposes of the program is strengthening the interaction of management teams, supporting the

effectiveness of Şişecam and developing role model approaches in the transformation process.

"WE ARE ŞİŞECAM" MEETINGS

The main purpose of these meetings is to spread Şişecam Values to all Şişecam employees. Meetings were completed in Turkey, Bosnia and Bulgaria and will be held in the other countries. Within the scope

of the activities aimed at disseminating the values to large audiences, "We Are Part of the Şişecam Family" workshops were organized in and out of Turkey in 2014.



DIVERSITY AND INCLUSION



TWO OF THE CORE VALUES OF OUR ORGANIZATION IMPLICITLY ACKNOWLEDGE THE IMPORTANCE OF DIVERSITY AND INCLUSION TO OUR BUSINESS.

Şişecam recently revisited the Şişecam Corporate Values to incorporate its employee strategy. Two of the core values of its organization implicitly acknowledge the importance of diversity and inclusion to its business. Şişecam performed a company-wide online employee

survey, the results of which Şişecam integrated into Şişecam Flat Glass policies and values. As presented in the Values section under Corporate Governance of this report, two of Şişecam’s core values are:

- ◆ Şişecam exhibits a fair and transparent management approach.
- ◆ Şişecam respects differences.

A fundamental value at Şişecam Flat Glass, “We respect differences” guides the company to take an inclusive approach in considering the diverse insights at the company. By harnessing the knowledge and perspectives of its diverse workforce, Şişecam is well-positioned to bring the necessary improvements to its workplace, generate innovative solutions and strengthen its reputation as a global leader.

Şişecam strives to create an inclusive workplace and ensure that HR processes such as recruitment, career development and training are free of discrimination. Accordingly, no HR policies or procedures indicate any difference between male and female employees at Şişecam.

Consistent with this value, Şişecam reaffirms its commitment to equal opportunity with the value “We exhibit a fair and transparent management approach.”

Details of the Company’s employee profiles (gender, age and employment category) along with new hires and leavers’ data are shown below. The vast majority of our employees are on full-time contracts.

TOTAL WORKFORCE BY AGE, GENDER AND EMPLOYEE CATEGORY BY DECEMBER 31, 2014.

Category	Age	2014		
		Male	Female	Total
Manager	under 30	1	0	1
	30-50	47	13	60
	over 50	14	2	16
	TOTAL	62	15	77
Staff	under 30	364	76	440
	30-50	1,851	93	1,944
	over 50	27	4	31
	TOTAL	2,242	173	2,415
Total Workforce		2,304	188	2,492

COMPOSITION OF GOVERNANCE BODIES BY GENDER AND AGE

Governance Bodies	2014		Governance Bodies	2014	
	Number of employee			Number of employee	
Male	4		under 30	0	
Female	2		30-50	2	
Total	6		over 50	4	
			Total	6	

EDUCATION LEVEL

Education Level of Employees	2014		
	White-Collar	Blue-Collar	Total
Graduated from high school and under	132	1163	1,295
Associate degree	88	549	637
Graduated from university and above	542	18	560
Total Employees	762	1,730	2,492

NEW HIRES

Category	Age	2014		
		Male	Female	Total
Number of Managers hired during the reporting period	under 30	0	0	0
	30-50	3	1	4
	over 50	1	0	1
	Total	4	1	5
Number of Staff hired during the reporting period	under 30	115	35	150
	30-50	60	11	71
	over 50	2	1	3
	Total	177	47	224

Şişecam Flat Glass complies with the local parental leave regulations. Parental leave only applies to women in Turkey (new fathers are also given up to three days

for paternity leave). Below you can find the return to work and retention rate for our female employees.

PARENTAL LEAVE

	Number of employees entitled to parental leave	Number of employees that took parental leave	Number of employees who returned to work after end of parental leave	Number of employees who returned to work and were still employed 12 months later
Female (2014)	4	4	1	-

Note: Return to leave numbers are only for employees who took parental leave and returned to work in 2014. Because the reporting period is until 31 December 2014, retention rates are not yet possible for employees who returned in 2015. This data is going to be reported next year.



Corporate Social Responsibility

UNIVERSITY STUDENTS

Educational programs are organized at architecture and engineering faculties of various universities (Uludağ Uni., Mimar Sinan Uni., METU, ITU, Tunceli Uni.). Future decision makers are educated about energy efficient glass.

PUBLIC INSTITUTIONS

- ◆ “Heat Insulation Regulation” (TS 825) Through the non-governmental organizations (NGOs) in which Şişecam Flat Glass holds membership, Şişecam Flat Glass took an active role in the revision of the TS 825 heat insulation regulation standard for buildings. During the process Şişecam Flat Glass contributed to the reduction of the thermal insulation value for windows (U window value), which has an important role in the efficient use of energy, from 2.4 W/m²K to 1.8 W/m²K. After the publication of the revised TS 825 standard on December 18th, 2013, it is now compulsory to use coated glass in new buildings. Thus, a significant development has been achieved in the process of contributing to energy saving in windows, which account for 30% of the heat loss in buildings. Consequently, a rapid rise in the use of coated glass in building construction will continue over the next period.
- ◆ Sector professionals working at public institutions are informed and educated about energy efficient glass.
- ◆ Şişecam Flat Glass is working in collaboration during product specifying period for technical specifications with Ministry of National Defence and Ministry of Justice which makes a very good example and inspiration for raising private sector’s consciousness due to green buildings and energy consumption issues.
- ◆ Technical support is given to public institutions - technical specifications documents and static calculations are prepared. (hospitals, schools etc.)
- ◆ “81 il 81 eğitim projesi” (“81 city 81 lecture” Project), Şişecam Flat Glass organized lectures in each city of Turkey at public institutions such as Ministry of Environment and Urban Planning to increase awareness about energy saving with sustainable glass products.
- ◆ Şişecam Flat Glass attended National Energy Convention and Fair which held by Republic of Turkey Ministry of Energy and Natural Resources to increase the awareness about energy efficient glass products and their contribution to economy and environment.



WITH 81 CITY 81 LECTURE PROJECT, ŞİŞECAM FLAT GLASS INCREASE AWARENESS ABOUT ENERGY SAVING WITH SUSTAINABLE GLASS PRODUCTS.



END-USERS

- ◆ “Isıcam Konfor Tasarruf Akademisi” (Isıcam Konfor Savings Academy) is being held at shopping centers/focus points of various cities. Children between 5-12 ages are educated about coated glass with Lego activities and games. Their parents are informed about coated glass facts.
- ◆ To reach our end users of tomorrow and increase the awareness of our products, Şişecam Flat Glass organized “Isıcam Konfor Tasarruf Akademisi” and “Glass Fusion Competition” for children. Glass fusion works made by children are rewarded in İş Kuleleri.
- ◆ Advertisement campaigns are focused on coated glass products and “Reduction of heating and cooling expenses” is emphasized.
- ◆ 444 9 872 hotline activated to contact with end-users; to inform about coated glass facts.
- ◆ Şişecam Flat Glass prepared an “Isıcam Handbook” to end users to choose the right glass for their needs.
- ◆ To increase the awareness of energy efficiency and noise controlling at urban transformation regions such as Kadıköy, end users experienced Isıcam Konfor Test Tunnel and Noise Control Glass Test Stand.
- ◆ To take attention end users to noise pollution, open-air activities in the Kanyon Shopping Mall is organized for Noise Control Glass



CUSTOMERS

Şişecam Flat Glass aim to be the supplier of choice of our customers. This means that all our businesses must be the most efficient, most reliable, most responsive and most sustainable. Şişecam Flat Glass' objective is

to produce a wide range of effective, innovative and sustainable products in all its business and its R&D effort is focused on product and process development to support this objective.

- ◆ Şişecam Flat Glass has a web based portal which works 7/24, gives technical support and helps marketing and sales activities for all Isıcam Authorized Producers. Customized passwords required when using this portal for privacy.
- ◆ Mutual privacy and data storage issues in franchise agreements with customers are guaranteed.

PVC GLAZIERS

In Turkey, mostly PVC frame windows are used in residential buildings and DGU units are mainly sold by the PVC window glaziers to end users or construction firms. As PVC window glaziers are the final point of

contact with end users, collaboration with these glaziers is an important strategy to increase the use of energy efficient glazing units.

- ◆ As a collaboration strategy with window glaziers, "1 Sat 2 Kazan"(1 sell 2 gain) campaign is organized. Şişecam Flat Glass paid 2 liras for every 1 m² DGU units with Low-e coated glass (Isıcam Konfor or Isıcam Sinerji) which was sold by PVC Window Glaziers in order to promote and reward the use of energy efficient products. 11 PVC brands operating in the Turkish market has participated to the "1 Sat 2 Kazan" campaign. With the campaign, 5000 authorized dealers (PVC glaziers) from 11 brands were encouraged to propose energy efficient glazing units to the end users.
- ◆ Promotional materials are given to the PVC glaziers and educational programs are organized about the use of energy efficient glass products.
- ◆ To prevent incorrect installations, Şişecam Flat Glass prepared an "Isıcam Installation Booklet" for PVC frame producers.
- ◆ Presentation KITs for glaziers are prepared to increase communication activities towards end users through PVC glaziers.



ŞİŞECAM FLAT GLASS'
OBJECTIVE IS TO PRODUCE
A WIDE RANGE OF
EFFECTIVE, INNOVATIVE AND
SUSTAINABLE PRODUCTS IN
ALL ITS BUSINESS.



TEMPERABLE LOW-E
COATED (HEAT CONTROL)
GLASS "ISICAM SİNERJİ T"
WAS AWARDED
AS THE FACADE MATERIAL
OF 2014.



AWARDS:

- ◆ Şişecam Flat Glass's new product temperable Low-E coated (heat control) glass "Isıcam Sinerji T" was awarded as the façade material of 2014.
- ◆ The Most Successful Industrial Plant Award Goes to ŞİŞECAM Flat Glass

Şişecam Flat Glass's Yenişehir plant is rewarded with 'The Most Successful Industrial Plant' award in the scope of Industry Energy Efficiency Project (SANVER 2013), organized by the general directorate of Renewable Energy department of the Ministry of Energy and Natural Resources. Şişecam Flat Glass's Yenişehir Plant has also received an award in 'Increasing Industrial Energy Efficiency' category.



CAMDAN YANSIMALAR II

GENERAL STANDARD DISCLOSURES

Standard Disclosure	Description	Reference	External Assurance
STRATEGY AND ANALYSIS			
G4-1	Statement from the most senior decision-maker of the organization about the relevance of sustainability to the organization and the organization's strategy for addressing sustainability	Letter From Şişecam CEO, page 4; Letter From Flat Glass President, page 6	No
ORGANIZATIONAL PROFILE			
G4-3	Name of the organization	Trakya Cam Sanayii A.Ş.	No
G4-4	Primary brands, products and services	Trakya Cam Sanayii A.Ş.: an Introduction, page 8	No
G4-5	Location of HQ	Istanbul, Turkey	No
G4-6	Number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report	Trakya Cam Sanayii A.Ş.: an Introduction, page 8	No
G4-7	Nature of ownership and legal form	Organizational Structure, page 10	No
G4-8	Markets served	Worldwide	No
G4-9	Report the scale of the organization, including:	Organizational Structure, page 10	No
G4-10	Workforce breakdown	Human Resources, page 62	No
G4-11	Percentage of total employees covered by collective bargaining agreements	Strong Industrial Relations, page 61	No
G4-12	Organization's supply chain	Supply Chain, page 45	No
G4-13	Significant changes during the reporting period	For significant changes to the structure of Trakya Cam Sanayii A.Ş. during the reporting period, please refer page 31 in Trakya Cam 2014 Annual Report. (http://www.sisecamduzcam.com/19/44/0/annual-activity-reports)	No
G4-14	Precautionary approach principle	Our Environmental Approach, page 36	No
G4-15	Externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses	Approach to Standards and Organizations, page 23	No
G4-16	Memberships of associations and national or international advocacy organizations maintained at the organizational level	Approach to Standards and Organizations, page 23	No
IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES			
G4-17	Scope of consolidated financial statements and omissions to the scope	Şişecam Flat Glass has operations in 9 countries. For all entities included in consolidated financial statements, please refer to Appendix 1 at Page 84. For more detailed information on all entities, please refer to Trakya Cam Sanayii A.Ş. 2014 Annual Report, page 30. (http://www.sisecamduzcam.com/19/44/0/annual-activity-reports) The sustainability information in this report covers all operations in Turkey.	No
G4-18	Process for defining the report content and the Aspect Boundaries and how the organization has implemented the Reporting Principles for Defining Report Content.	Approach to Materiality, page 22	No
G4-19	Identified Material Aspects	Approach to Materiality, page 22	No
G4-20	For each material Aspect, report the Aspect Boundary within the organization	Approach to Materiality, page 22	No
G4-21	For each material Aspect, report the Aspect Boundary outside the organization	Approach to Materiality, page 22	No
G4-22	Effect of any restatements of information provided in previous reports, and the reasons for such restatements	There are no restatements in this first report of Şişecam Flat Glass. .	No
G4-23	Significant changes from previous reporting periods in the Scope and Aspect Boundaries.	This is Şişecam Flat Glass's first sustainability report.	No

STAKEHOLDER ENGAGEMENT

G4-24	List of stakeholder groups engaged by the organization	Approach to Stakeholders, page 18	No
G4-25	Basis for identification and selection of stakeholders with whom to engage	Approach to Stakeholders, page 18	No
G4-26	Approach to stakeholder engagement	Approach to Stakeholders, page 18	No
G4-27	Key topics and concerns that have been raised through stakeholder engagement	Approach to Stakeholders, page 18	No

REPORT PROFILE

G4-28	Reporting period	1 January 2014 – 31 December 2014	No
G4-29	Date of most recent previous report	1 January 2014 – 31 December 2014	No
G4-30	Reporting cycle	Annual	No
G4-31	Contact point for questions regarding the report or its contents	Seçil Erman Quality, Environment and Technical Standards Manager serman@sisecam.com +90 (212) 350 3376	No
G4-32	“In accordance” option, GRI content index, external assurance report	This year’s report is prepared in accordance with GRI G4 reporting standards to “Core” level. The GRI content index can be found in pages 77-83. We haven’t obtained external assurance for this year’s report.	No
G4-33	Organization’s policy and current practice with regard to seeking external assurance for the report	We have not obtained external assurance for our first G4 report. However, we prepared all our data accordingly and with the vision to obtain external assurance in the future	No

GOVERNANCE

G4-34	Governance structure of the organization, including committees of the highest governance body. Identify any committees responsible for decision-making on economic, environmental and social impacts.	Risk Management and Internal Audit Activities, page 14	No
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ETHICS AND INTEGRITY

G4-56	Organization’s values, principles, standards and norms of behaviour such as codes of conduct and codes of ethics	Ethics and Code of Conduct, page 15	No
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SPECIFIC STANDARD DISCLOSURES

Standard Disclosure	Description	Reference	Omissions	External Assurance
CATEGORY: ECONOMIC				
ASPECT: ECONOMIC PERFORMANCE				
G4-DMA	Generic disclosures on management approach	Organizational Structure, page 10	-	No
G4-EC1	Direct economic value generated and distributed	Organizational Structure, page 10	-	No
ASPECT: MARKET PRESENCE				
G4-DMA	Generic disclosures on management approach	Human Resources, page 62	-	No
G4-EC6	Proportion of senior management hired from the local community at significant locations of operation	100%. Local is defined as Turkey. Senior manager is defined as Plant Managers and all directors.	-	No
ASPECT: INDIRECT ECONOMIC IMPACTS				
G4-DMA	Generic disclosures on management approach	Approach to Sustainable Products, page 26	-	No
G4-EC8	Significant indirect economic impacts, including the extent of impacts	Approach to Sustainable Products, page 26	-	No
CATEGORY: ENVIRONMENTAL				
ASPECT: ENERGY				
G4-DMA	Generic disclosures on management approach	Our Environmental Approach, page 36	-	No
G4-EN3	Energy consumption within the organization	Energy Management and Performance, page 41	-	No
G4-EN6	Reduction of energy consumption	Energy Management and Performance, page 41	-	No
ASPECT: WATER				
G4-DMA	Generic disclosures on management approach	Water Management, page 44	-	No
G4-EN8	Total water withdrawal by source	Water Management, page 44	-	No
G4-EN10	Percentage and total volume of water recycled and reused	Water Management, page 44	-	No
ASPECT: EMISSIONS				
G4-DMA	Generic disclosures on management approach	Greenhouse Gas (GHG) Emissions, page 42	-	No
G4-EN15	Direct greenhouse gas (ghg) emissions (scope 1)	Greenhouse Gas (GHG) Emissions, page 42	-	No
G4-EN16	Energy indirect greenhouse gas (ghg) emissions (scope 2)	Greenhouse Gas (GHG) Emissions, page 42	-	No
G4-EN19	Reduction of greenhouse gas (ghg) emissions	Energy Management and Performance, page 41	-	No
G4-EN21	Nox, sox, and other significant air emissions	Greenhouse Gas (GHG) Emissions, page 42	-	No

ASPECT: EFFLUENTS AND WASTE

G4-DMA	Generic disclosures on management approach	Waste Management, page 43	-	No
G4-EN22	Total water discharge by quality and destination	Keeping in line with its environmental compliance promise and the Şişecam Environmental and Energy Policy, Şişecam Flat Glass fully complies with all applicable environmental laws and regulations. In 2014, no parameters in our waste water samples were found to be higher than the legal limit set by Turkish Regulation on Water Pollution Control.	-	No
G4-EN23	Total weight of waste by type and disposal method	Waste Management, page 43	-	No

ASPECT: COMPLIANCE

G4-DMA	Generic disclosures on management approach	Environmental Compliance, page 40	-	No
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	There were no significant fines or non-monetary sanctions for non-compliance with environmental laws and regulations	-	No

CATEGORY: SOCIAL**SUB-CATEGORY: LABOR PRACTICES AND DECENT WORK****ASPECT: EMPLOYMENT**

G4-DMA	Generic disclosures on management approach	Human Resources, page 62	-	No
G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region	Human Resources, page 62	-	No
G4-LA3	Return to work and retention rates after parental leave, by gender	Human Resources, page 62	-	No

ASPECT: OCCUPATIONAL HEALTH AND SAFETY

G4-DMA	Generic disclosures on management approach	Occupational Health and Safety, page 55	-	No
G4-LA5	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs	Occupational Health and Safety, page 55	-	No
G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	Occupational Health and Safety, page 55	-	No

ASPECT: TRAINING AND EDUCATION

G4-DMA	Generic disclosures on management approach	Human Resources, page 62	-	No
G4-LA9	Average hours of training per year per employee by gender, and by employee category	Human Resources, page 62	-	No
G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	Human Resources, page 62	-	No

ASPECT: DIVERSITY AND EQUAL OPPORTUNITY

G4-DMA	Generic disclosures on management approach	Ethics and Code of Conduct, page 15	-	No
G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	Human Resources, page 62	-	No

ASPECT: EQUAL REMUNERATION FOR WOMEN AND MEN

G4-DMA	Generic disclosures on management approach	In Şişecam Flat Glass, allocation of salaries and benefits only differ in relation to the scope, experience and skills related to the requirements of the job and job related criteria. There is no discrimination against gender, religion, language, race/ ethnicity or disability.	-	No
G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	1/1	-	No

SUB-CATEGORY: HUMAN RIGHTS**ASPECT: FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING**

G4-DMA	Generic disclosures on management approach	Strong Industrial Relations, page 61	-	No
G4-HR4	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights	Strong Industrial Relations, page 61	-	No

SUB-CATEGORY: SOCIETY**ASPECT: ANTI-CORRUPTION**

G4-DMA	Generic disclosures on management approach	Compliance with the Law and Regulations, page 15	-	No
G4-SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	All operations are assessed by the risk management department for corruption. In 2014, no significant corruption incidents or risks have been found by the risk management department.	-	No

ASPECT: ANTI-COMPETITIVE BEHAVIOR

G4-DMA	Generic disclosures on management approach	Compliance with the Law and Regulations, page 15	-	No
G4-SO7	Total number of legal actions for anti competitive behavior, anti-trust and monopoly practices and their outcomes	There were no preliminary surveys, investigations or lawsuits in 2014 for Trakya Cam Sanayii A.Ş..	-	No

ASPECT: COMPLIANCE

G4-DMA	Generic disclosures on management approach	Compliance with the Law and Regulations, page 15	-	No
G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	There were no preliminary surveys, investigations or lawsuits in 2014 for Trakya Cam Sanayii A.Ş..	-	No

SUB-CATEGORY: PRODUCT RESPONSIBILITY**ASPECT: CUSTOMER HEALTH AND SAFETY**

G4-DMA	Generic disclosures on management approach	Quality and Compliance, page 24	-	No
G4-PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	No incidents in 2014.	-	No

ASPECT: PRODUCT AND SERVICE LABELING

G4-DMA	Generic disclosures on management approach	Quality and Compliance, page 24	-	No
G4-PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling, by type of outcomes	No incidents in 2014	-	No

ASPECT: CUSTOMER PRIVACY

G4-DMA	Generic disclosures on management approach	Customer Privacy, page 49	-	No
G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	No substantiated complaints in 2014	-	No

Appendix 1 - List of all entities included in the organization's consolidated financial statements or equivalent documents.

	Nature of business	Country of registration
Trakya Cam Sanayii A.Ş.	Production and sales of float glass, mirror, automotive glass and coated glass, patterned glass, solar glass	Turkey
Trakya Yenişehir Cam Sanayii A.Ş.	Production and sales of float glass, coated glass, laminated glass	Turkey
Çayırova Cam Sanayii A.Ş.	Commercial activity	Turkey
Trakya Polatlı Cam Sanayii A.Ş.	Production and sales of float glass	Turkey
Trakya Glass Bulgaria EAD	Automatic production and sales of float glass, Glassware, automotive glass, home appliances and mirror, coated glass, laminated glass	Bulgaria
Trakya Cam Investment B.V.	Finance and investment company	Netherlands
TRSG Autoglass Holding B.V.	Finance and investment company	Netherlands
Trakya Investment B.V.	Finance and investment company	Netherlands
TRSG Glass Holding B.V.	Finance and investment company	Netherlands
Trakya Glass Rus AO ¹	Production and sales of float glass	Russia
Automotive Glass Alliance Rus AO ¹	Production and sales of automotive glass and home appliances glass	Russia
Automotive Glass Alliance Rus Trading OOO	Importing and sales services	Russia
Trakya Glass Rus Trading OOO	Importing and sales services	Russia
Glasscorp S.A.	Production and sales of automotive glass	Romania
Fritz Holding GmbH	Holding services	Germany
Richard Fritz Spol S.R.O.	Glass encapsulation production and sales services	Slovakia
Richard Fritz Prototype+Spare Parts GmbH	Glass encapsulation production and sales services	Germany
Richard Fritz Kft	Glass encapsulation production and sales services	Hungary
HNG Float Glass Limited	Production and sale of float glass	India
Saint Gobain Glass Egypt S.A.E.	Production and sales of flat glass	Egypt

¹ The legal title of Trakya Glass Rus ZAO was changed as Trakya Glass Rus AO; Automotive Glass Alliance Rus ZAO was changed as Automotive Glass Alliance Rus AO on 11 December 2014.

Reporting Consultancy
EY Turkey / ey.com/tr

Graphic Design & Layout
DENK / denkdesign.net

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74 KG OF LANDFILL

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149 KM TRAVEL IN THE AVERAGE EUROPEAN CAR

15 KG CO₂ AND GREENHOUSE GASES

216 kWh OF ENERGY

121 KG OF WOOD

Source: Carbon footprint data evaluated by Labelia Conseil in accordance with the Bilan Carbone® methodology. Calculations are based on a comparison between the recycled paper used versus a virgin fibre paper according to the latest European BREF data (virgin fibre paper) available. Results are obtained according to technical information and subject to modification.



