



# NaturalLight

SHEDS LIGHT ON NATURE



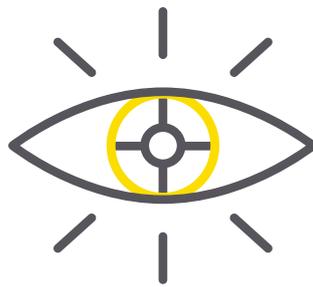
# About Us

Assan Panel, the leading organization in the sandwich panel industry, initiated its manufacturing operations in 1990 with its first factory in Tuzla, Istanbul which had a production capacity of 4 million m<sup>2</sup> per year. Having continued to make investments to increase its production capacity over the years, Assan Panel invested in Iskenderun plant in 2004 with a manufacturing capacity of 3 million m<sup>2</sup>/year, Balikesir plant in 2009 with a manufacturing capacity of 3 million m<sup>2</sup>/year, and Jordan plant in 2012 with a manufacturing capacity of 4.5 million m<sup>2</sup>/year, respectively. Having successfully completed the investment for the second production line in Tuzla, Istanbul plant in 2015 with a capacity of 3.5 million m<sup>2</sup>/year, it reached a total production capacity of 18 million m<sup>2</sup>/year. In 2021, Assan Panel invested in Turkic Republics for the first time and the Azerbaijan plant began its manufacturing operations with the partnership of STP (Sumgayit Texnologiyalar Park). Assan Panel, a key pioneer in the industry, contributes to the construction of sustainable and eco-friendly buildings with its sandwich panel products with PIR and rockwool filling in addition to panels with polyurethane filling for cold room, roof, and exterior wall applications in compliance with fire safety regulations, panels ready for mounting of solar systems, project-specific custom accessories, polycarbonate skylights, fittings consisting of a wide range of screws as well as construction chemicals consisting of sealing and filling products. Assan Panel provides high-quality, application services with a wide range of high-quality, safe, innovative, fire-resistant products as well as domestic and international business partners. Assan Panel, which has pioneered the firsts in the sector, is the leading manufacturer in Turkey with the FM certificate it received in 2015, FM approval with no height limit in buildings and many other international certificates. Playing an active role in the global market by exporting to 85 countries around the world under its brands such as AssanPU, Assan Demir, AssanWool, and AssanBoard; Assan Panel is an overall solution partner for industrial buildings.



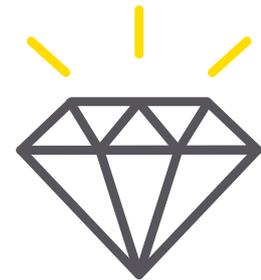
## Our Mission

Ensuring a sound growth together with our business partners by providing reliable, sustainable, and innovative solutions with the highest benefit in line with customer requirements.



## Our Vision

Becoming a leading, sustainable, and innovative solution partner in the industrial construction market.



## Our Values

- Honesty and Integrity
- Reliability
- Team Spirit
- Innovation
- Social and Environmental Consciousness

Our NaturaLight greenhouse polycarbonate solutions provide excellent long-term light transmission, thermal and structural performance with superior resistance to UV damage. In addition, our in-house technical team can help you find the best balance between natural and artificial lighting to achieve the maximum energy efficiency and the best building design.



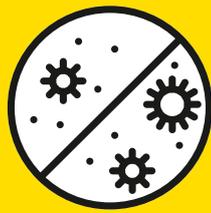
# Build your greenhouse once, not every season!



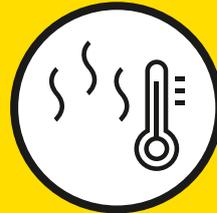
**HIGH LIGHT  
TRANSMITTANCE**



**HIGH IMPACT  
RESISTANCE**



**IR  
PROTECTION**



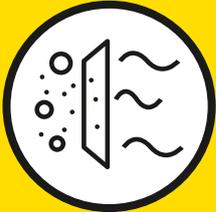
**MINIMUM HEATING  
COSTS**



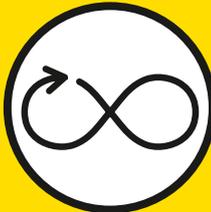
**FIRE  
RESISTANT**



**DOUBLE-SIDED  
UV PROTECTION**



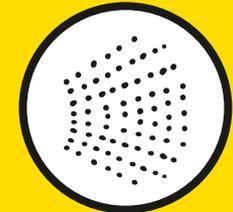
**ANTI-FOG**



**LONG  
LASTING**



**APPLICATION AND  
PROJECT SUPPORT  
SERVICES**



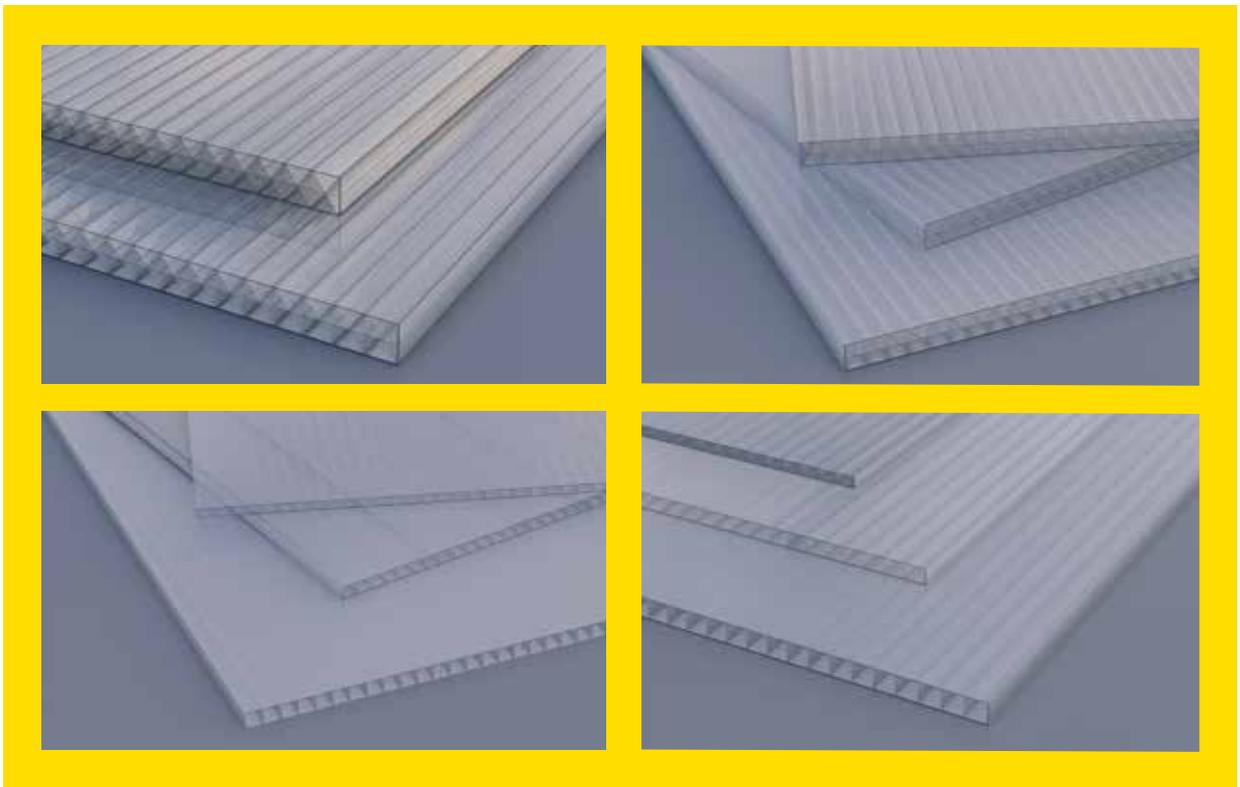
**DIFFUSION  
EFFECT**



# Corrugated Polycarbonate Sheet

Corrugated polycarbonate sheets provide high performance where transparency and impact resistance are crucial. The fact that corrugated polycarbonate sheets can be used in all areas makes them the ideal option.

The air between the separating walls inside the polycarbonate sheet provides thermal insulation. The polycarbonate sheet ensures high performance in both structural rigidity and flexibility thanks to the filler material that forms these walls.



**Production Location:** Sumqayit/Azerbaijan  
**Thickness (mm):** 4-6-8-10-16-20  
**Effective Width (mm):** 2100  
**Color Options:** Transparent, opal and different color options  
**Length (mm):** Min. 100mm/max. depends on transportation and installation conditions.



# NaturaLight Greenhouse Polycarbonate Sheets



- It is lighter than glass and is advantageous with its low cost.
- Has high heat resistance.
- Has high impact resistance.
- It can be manufactured in transparent or opal form based on suitable lighting needs.
- It can be manufactured in the desired length based on architectural requirements and transport conditions.

- Can be bent for vaulted roof etc. applications.
- Has high UV resistance.
- Easy and practical installation.
- Aesthetic look.
- Application is made with sealing wick for water tightness.
- The joint is provided with aluminum slats.
- When polycarbonate mounting laths are used, it increases sealing and impact resistance in bad weather conditions.

# IR PROTECTION

Heating is caused by IR rays from the sun. These rays enter the greenhouse through the glass or plastic covering material and when they reach the soil or plants, they are converted into heat energy. This warms the soil and the plant. This heating causes diseases in plants, drying of the soil, disruption of the moisture balance in the greenhouse and damage to the plants in the greenhouse due to excessive heat. NaturaLight sheets eliminate the negative conditions that these rays will create in greenhouse agriculture and increase its efficiency with its superior protection feature.



## Extended Growing Season

The benefits of polycarbonate materials have a significant impact on the overall performance of a greenhouse, essentially a long growing season. This allows you to get more out of your herbs and vegetables all year round.

An extended growing season allows you to harvest more vegetables or fruits for every bit of time and money you invest. A naturally extended growing season means less artificial warming. It also helps you save electricity and most importantly time.



# High Light Transmittance

NaturaLight corrugated polycarbonate sheets have high light transmittance. Thanks to this feature, plants develop more than other greenhouse covering materials and greenhouse efficiency increases.





## Diffusion Effect

The diffusion feature in greenhouse covering materials has two major advantages. The diffusion effect ensures that the light spreads homogeneously in the greenhouse. In direct light, the tops of plants and leaves receive most of the light. In this way, the upper parts photosynthesize more, but since the leaves in the middle and lower part receive less light, they photosynthesize less and their growth is limited. With the diffusion effect, this situation is minimized and greenhouse efficiency is increased.

Studies have shown that pepper production increased by 5%-6% and cucumber yield increased by 8% with the diffusion effect. In tomato, yield was observed with an increase in crop weight.

# Permanent ANTI-FOG

The vapor condensed due to ambient humidity on greenhouse roofs forms water droplets on the surface of the greenhouse cover. These droplets cause refraction and reflection of the sunlight needed by the plant.

NaturaLight greenhouse polycarbonate sheets prevent the formation of droplets of condensed water vapor with its permanent anti-fog feature and allows it to spread as a film layer on the greenhouse cover. Heat vapor and drops that condense on greenhouse covers without anti-fog features cause various diseases and burns in the plants grown as a result of the sunlight creating a lens effect on the plant and the drops falling. There is also a reduction in the intensity of the light required for the cultivated plant, resulting in reduced productivity. One of the most important features of NaturaLight greenhouse polycarbonate sheets is that their anti-fog feature is permanent for many years.



# Double Sided UV Protection



Naturalight greenhouse polycarbonate sheets can be produced with double-sided UV protection if desired. The most important advantage of double-sided UV protection in greenhouse applications is to prevent UV rays from the sun from damaging the interior parts of the side walls, especially when the roof is opened for ventilation on the side walls.



## High Impact Resistance

NaturaLight polycarbonate sheets have high impact resistance even at extreme temperatures such as -30, +120 C. Polycarbonate materials are 200 times more impact resistant than glass. Especially corrugated polycarbonate sheets of 8 mm and above are resistant to hail. NaturaLight greenhouse polycarbonate sheets do not deform under wind like other greenhouse covers and maintain their structural rigidity and integrity. Any partial damage will not be reflected on the whole sheet.

# Application and Project Support Services

In greenhouse applications, we provide not only sheet supply but also project support according to the climatic conditions of the region where the greenhouse will be established and the characteristics of the plant to be grown. In this context, we are your solution partner in matters such as construction details and the thickness and properties of the greenhouse cover material to be used.







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