



Introduction to Products



MATERIAL AVAILABILITY

AVAILABLE PROFILE

Plain, Embossed, Matte Series

AVAILABLE THICKNESS

1mm to 25mm Available

WIDTH

up to 2100mm Available

LENGTH

Upon Request Manufacturing

TOLERANCES

Overall Gauge + 0.03mm

WIDE RANGE OF APPLICATIONS

- Conservatory
- Green Houses
- Vending Machine
- Roofing Skylight
- Advertising Signage
- Canopy
- Partition
- Ceiling Covering
- Interior Decoration

Polycarbonate sheets are a popular application of polycarbonate, as they offer a variety of benefits and are used in many industries. These sheets are typically made by extruding polycarbonate resin into a flat sheet, which can then be cut or formed into various shapes and sizes. Some common products made from polycarbonate sheets include.

Skylights and roofing:

Polycarbonate sheets are often used for skylights and roofing due to their durability, transparency, and resistance to weathering and UV rays.

Greenhouses and agricultural structures:

Polycarbonate sheets are used for greenhouses and agricultural structures due to their light transmission and thermal insulation properties.

Signage and displays:

Polycarbonate sheets are used for signage and displays due to their transparency, durability, and ability to be easily cut and formed into different shapes.

Safety barriers and partitions:

Polycarbonate sheets are used for safety barriers and partitions due to their impact resistance and shatterproof properties.

Machine guards and protective covers:

Polycarbonate sheets are used for machine guards and protective covers due to their strength, durability, and ability to withstand high temperatures.

Overall, polycarbonate sheets offer a wide range of benefits and are used in many different industries and applications due to their durability, transparency, and resistance to impact, weathering, and UV rays.



Introduction to Products

JCM Polycarbonate is a lightweight, durable, and transparent material that has excellent impact resistance and UV stability

JCM Polycarbonate sheets typically consist of two layers - an outer layer and an inner layer. The outer layer is usually coated with a UV-resistant material to protect the sheet from UV degradation.

Overall, the composition of **JCM** polycarbonate sheets makes them an ideal choice for various applications, including roofing, skylights, greenhouses, and more.

UV-RESISTANT LAYER

POLYCARBONATE SHEET



Long Lifespan

Polycarbonate sheets have a long lifespan and require minimal maintenance, making them a cost-effective option in the long run.



UV Resistance

Polycarbonate sheets are resistant to UV radiation, which means they will not yellow or degrade when exposed to sunlight. This makes them ideal for outdoor applications.



Thermal Insulation

Polycarbonate sheets have good thermal insulation properties, which can help reduce heating and cooling costs.



Recommended Installation Guide



Impact Resistance

Polycarbonate sheets are extremely durable and can withstand high impact forces. They are virtually unbreakable, making them a popular choice for use in areas where safety is a concern.



Chemical Resistance

Polycarbonate sheets are resistant to many chemicals, including acids and alkalis. This makes them suitable for use in environments where chemical exposure is a concern.



Light Weight

Polycarbonate sheets are lighter than glass and many other materials, which makes them easier to handle and install.



High Transparency

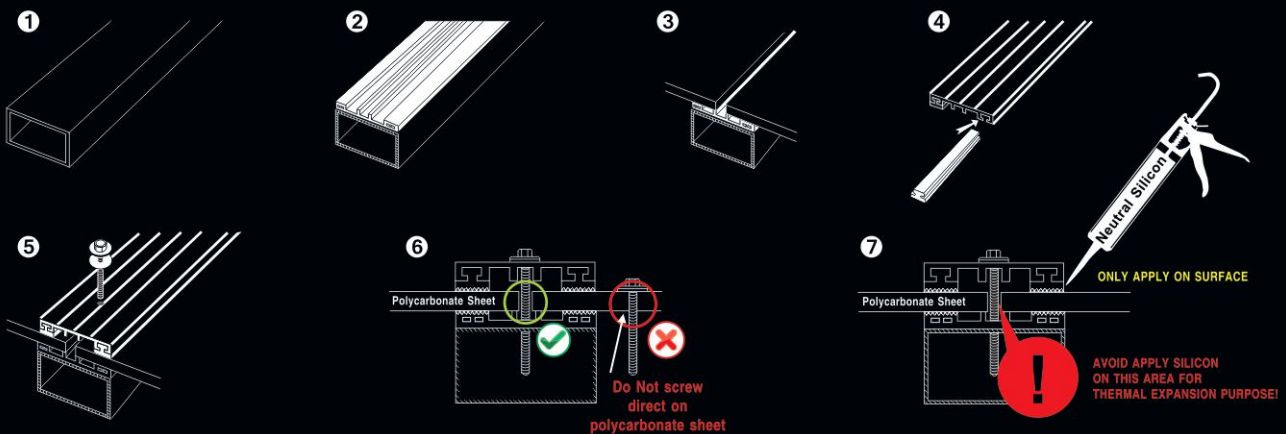
Polycarbonate sheets are highly transparent, allowing natural light to pass through. This makes them ideal for use in applications such as skylights, greenhouses, and displays.



Easy to Fabricate

Polycarbonate sheets are easy to cut, drill, and shape, which makes them ideal for custom applications.

INSTALLATION GUIDELINE



- ❶ The paint must be dry completely on the framework without any solvent remains.
- ❷ Place the aluminium linkage profile on the framework.
- ❸ Check the centre distance of rafters and screw on the framework accordance with design.
- ❹ Put the santoprene gasket on aluminium linkage profile.
- ❺ Place fixing screws with seals only in the support frame line.
- ❻ Fixed the sheets on the framework by an assembly system, which consists of aluminium linkage profile and santoprene gaskets.
- ❼ Only use the neutral silicone on polycarbonate surface, avoid apply in the inner framework. The sheets must not be fixed or clamped too tight as this allow for thermal expansion and contraction.



Technical Data

POLYCARBONATE TECHNICAL PROPERTIES

FEATURE	METHOD	VALUE UNIT
MECHANICAL		
TENSILE MODULUS	ISO 527-1-2	2349 MPa
YIELD STRESS	ISO 527-1-2	>60 MPa
YIELD STRAIN	ISO 527-1-2	6 %
CHARPY IMPACT STRENGTH	ISO 179-leU	NO BREAKAGE KJ/m ²
CHARPY IMPACT STRENGTH	ISO 179-leA	79P KJ/m ²
NOMINAL STRENGTH AT BREAK	ISO 527-1-2	>49 %
FLEXURAL MODULUS	ISO 178	2349 MPa
FLEXURAL STRENGTH	ISO 178	89 MPa
PHYSICAL		
DENSITY	ISO 51183	1.20 g/cm ³
WATER ABSORPTION EQUILIBRIUM	ISO 62,23 °C 50% RELATIVE HUMIDITY	0.13 %
WATER ABSORPTION EQUILIBRIUM	ISO 62,23 °C	0.34 %
MOULD SHRINKAGE	SABIN ENGINEERING TEST	0.6-0.8 %
THERMAL		
VICAT SOFTENING TEMPERATURE	ISO 306,50 N,50 °C/h	147 g/cm ³
THERMAL CONDUCTIVITY	ISO 8302	0.2 W/M °C
COEFFICIENT OF LINEAR THERMAL EXPANSION	ISO 1135-2,23-80 °C	7 x10 ⁻⁵ / °C
TEMPERATURE OF DEFLECTION UNDER LOAD	ISO 75-1-2,1.80 MPa	127 °C
TEMPERATURE OF DEFLECTION UNDER LOAD	ISO 75-1-2,0.45 MPa	141 °C

THESE DATA CORRESPOND TO RAW MATERIAL VALUES

CHARACTERISTICS

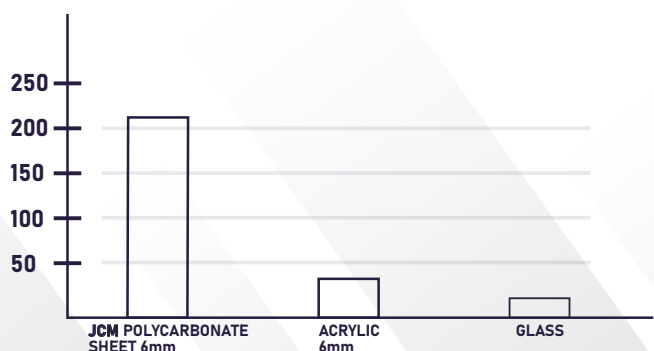
JCM Polycarbonate Sheets can be easily cold formed into gentle curves up to 175 times the sheet thickness. They can also be bent up to 90 degrees by workshop tools. The sheets weight 1.2kg/m²/mm whereas glass weight 2.5 kg /m²/mm; hence, these sheets are lighter than glass by 50%

The sheets can further be thermoformed without losing their UV resistance property. They are 250 times stronger than regular glass and 30 times stronger than acrylic. The service temperature of the sheets ranges between -40 to +120 C

LIGHT WEIGHT

THICKNESS mm	POLYCARBONATE kg/m ²	GLASS kg/m ²
2	2.4	5
2.4	2.8	5.9
3	3.6	7.8
4.5	5.4	11.7
6	7.2	15.6
9.5	11.4	23.4

LIGHT WEIGHT





Polycarbonate Sheet Production

