

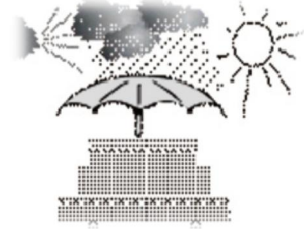
TECHNICAL DATA AND INSTALLATION GUIDE

POLYCARBONATE SOLID SHEET

1. Product Use Note

1) Handling and Storage

A) Polycarbonate (PC) sheet must be transported and stored horizontally on a flat, sturdy pallet whose dimension are equal to or larger than those of the sheet. The sheets should be fastened to the pallet. It is possible to store sheets of smaller dimensions on top of sheets that are larger but never store sheet of larger dimensions on top of smaller sheets.(see picture right)



B) PC sheets are packed with waterproof polyethylene protective films at the factory. And the protective films should be removed before the actual installation; the sheets should be kept in the dry and ventilated place with a top proof, out of direct sunlight and rain.

C) Avoid PC sheet exposed in the rain long-term, though it has PE protected film. Because water will spill into inner panel, leading heat accumulation. And then the film will turn softening and melt in the surface of the sheets, which will be very difficult to tear.

D) Do not cover or place on the pallet with material that are good conductor of heat(e.g.Metal,pipes,clear or dark objects) They will absorb and conduct heat and make damage to the sheets.

E) In case where it is necessary to store the pallet outdoors, it is possible to cover it with a white opaque polyethylene sheet, carton or any other material that does not absorb or conduct heat. The total pallet must be covered.

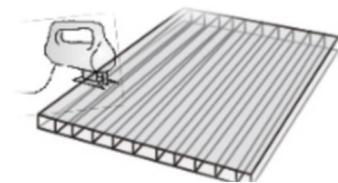
F) On the lower right corner of the UV side, Polycarbonate PC sheet has the factory qualified tags. Labels have UV side tip. To prolong the service life, please leave this face to the sun when installation.

2) Cutting Note

A) PC multi-wall sheets can be cut by standard wood or metal processing equipment, and the use of special designed plastic blade plate will mean better result. Ordinary circular saw and hand saw can also be used. It is possible to use a portable electric saw (machine saw).But be sure to cut them slowly.

B) The sheets with thin or medium thickness can be cut with short and sharp blade. A special manual longitudinal cable cutting tool can also be used (see picture right)

C) Note that in any case it is important to support the sheet in the vicinity of the cut to prevent vibration and to clear away the dust and debris generated by cutting to keep the sheet clean.



3) Sealing and bonding

PC multi-wall sheets can withstand a variety of corrosive chemicals (refer to the data list of PE common chemical properties), their tolerance is limited. There is also another group of chemicals which will damage the sheets. The extend of the damage depends on the severity of erosion the exposure time. Chloroprene rubber (CR), ethylene propylene diene monomer rubber (EPDM) and neutral silicone etc.are recommended when sealing. If other material is chosen, its chemical compatibility with Pc panels should be considered. In addition, the thermal expansion and anti-aging properties have to adapt to the sun sheet.

2 . Solid Sheet Installation

Solid sheet is clear as the glass, but its weight is just half as the glass. At the same time, it has the property of unbreakable and high impact. Thus it can be bended, equipment processed and thermal synthesis processed, so widely used in kinds buildings, engineer project ,advertisement ,decoration.

1) Polycarbonate solid sheets specification

Type	thickness (mm)	Width (mm)	length (mm)	weight (kg/m ²)	UV coating (um)	Transmittance clear	minimum bend radius(mm)	
universal solid sheet	1.5	1220-2100	30000	1.8	0.5	90	300	
	2	custom-made	custom-made	2.4	0.5	89	400	
	2.7			3.24	0.5	88	540	
	3	1220-2100 custom-made	2440 10000 30000 custom-made	3.6	>50	88	600	
	4			4.8	0.5	87	800	
	6			7.2	0.5	86	1200	
	8			9.6	0.5	83	1600	
	10			2440、10000 custom-made	12	0.5	82	2000
	12				14.4	0.5	81	2400
	14				16.8	0.5	77	2800
15	18				0.5			
Embossed solid sheet	3	1220、2100 custom-made	2440 custom-made	3.6	0.5		600	
	4			4.8	0.5		800	
	4.5			5.4	0.5		900	
	6			7.2	0.5		1200	
	8			9.6	0.5		1600	
	10			12	0.5		2000	
	12			14.4	0.5		2400	
	15			18	0.5		3000	
Frosted solid sheet	1.5	1220-2100 custom-made	2440	1.8	0.5		300	
	2		10000、30000	2.4	0.5		400	
	3		custom-made	3.6	0.5		600	
	4.5		3000、6000 custom-made	5.4	0.5		900	
	6			7.2	0.5		1200	
	8			9.6	0.5		1600	
	10			12	0.5		2000	
	12			14.4	0.5		2400	
	15			18	0.5		3000	

Advertising diffusion solid sheet	2	1220-2100 custom-made	2440 3000 6000 custom-made	2.4	0.5	400 500 600 800 1000 1200
	2.5			3	0.5	
	3			3.6	0.5	
	4			4.8	0.5	
	5			6	0.5	
	6			7.2	0.5	
Anti-scratch solid sheet	2	1220-2100 custom-made	1000 2440 3000 6000 custom-made	2.4	0.5	400 600 900 1200 1600
	3			3.6	0.5	
	4.5			5.4	0.5	
	6			7.2	0.5	
	8			9.6	0.5	
Corrugated solid sheet	0.7-1.5	600-1300mm	custom-made	custom-made		

2) Typical Physical Properties

According to the solid sheets and hollow sheets are all polycarbonate, uses and assembly is alike. Related detailed assembled data pls refer to hollow sheets technical data.

- Typical physical properties:

Property	Unit	Value
Specific gravity	g/m ³	1.2
Impact strength	J/m	850
Tensile strength	N/mm ²	>60
Flexural strength	N/mm ²	100
Modulus of elasticity	Mpa	2400
Elongation at break	%	100
Coefficient of thermal expansion	mm/m/°C	0.0652
Heat conductivity	W/m ² .k	2.3-2.9
Use temperature	°C	-40 ~+120
Fire rating	/	GB8624-1997 B1
UV protection layer	um	50
Yellowing index	/	△Y≤10
Anti-snow load strength(6-8mm)	KN/m ²	1.2
Anti-wind load strength(6-8mm)	KN/m ²	1.8
Light transmittance reduce	%	10

3) Installation Notes

1. For solid sheets with a length of more than 2 meters, it is not recommended to screw on the sheets. If the sheets must be screwed, the sheets shall be pre-drilled to release the internal stress of the sheets caused by temperature changes. The aperture should be 1.5-2 times larger than the bolt diameter, and

the distance from the edge to the aperture should be 20mm-40mm. The screw must not be screwed too tight.

2. Purline setting shall be determined according to the surroundings of the buildings and the selection of sheets specifications. See below Assembly Data.

3. The sealing material in contact with Polycarbonate solid sheet shall be EPDM, BUTYL self-adhesive EVA rubber strip. It is not recommended to use silica gel.

● Assembly Data

Type	Thickness	vertical purline	Lateral purline distance(mm)						load (KN/m ²)	
	(mm)	distance(mm)	200	400	600	800	1000	1200	1400	
Solid sheet	1.5	1050	0.4	0.3	0.2	-	-	-	-	
	2	1050	0.5	0.4	0.3	-	-	-	-	
	3	1050	0.7	0.6	0.5	-	-	-	-	
	4	1050	-	0.9	0.8	0.7	-	-	-	
	5	1050	-	1.1	1	0.9	-	-	-	
	6	1050	-	1.3	1.2	1.1	-	0.9	-	
	7	1050	-	1.5	1.4	1.3	1.2	1.1	-	
	8	1050	-	-	1.7	1.6	1.4	1.4	-	
	9	1050	-	-	1.9	1.8	1.7	1.6	-	
	10	1050	-	-	-	2.1	2	1.9	1.8	
	11	1050	-	-	-	-	2.2	2.1	2.0	
	12	1050	-	-	-	-	2.5	2.4	2.3	
	13	1050	-	-	-	-	2.7	2.6	2.5	
	14	1050	-	-	-	-	2.9	2.8	2.7	
	15	1050	-	-	-	-	3	2.9	2.8	

Above data is just for reference.

Expresses: The load of different specific sheet is on the basis of recommend vertical and lateral purlines distances.

Distance calculation is based on general knowledge, previous experience and professional technique directing to this kind of products.

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