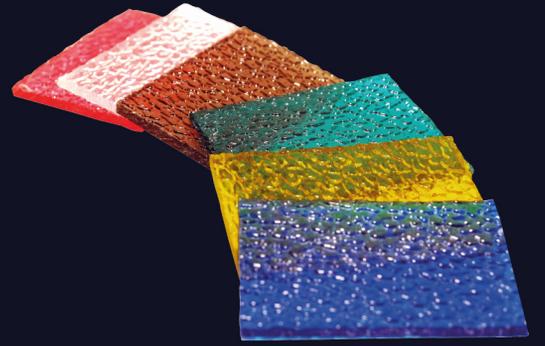
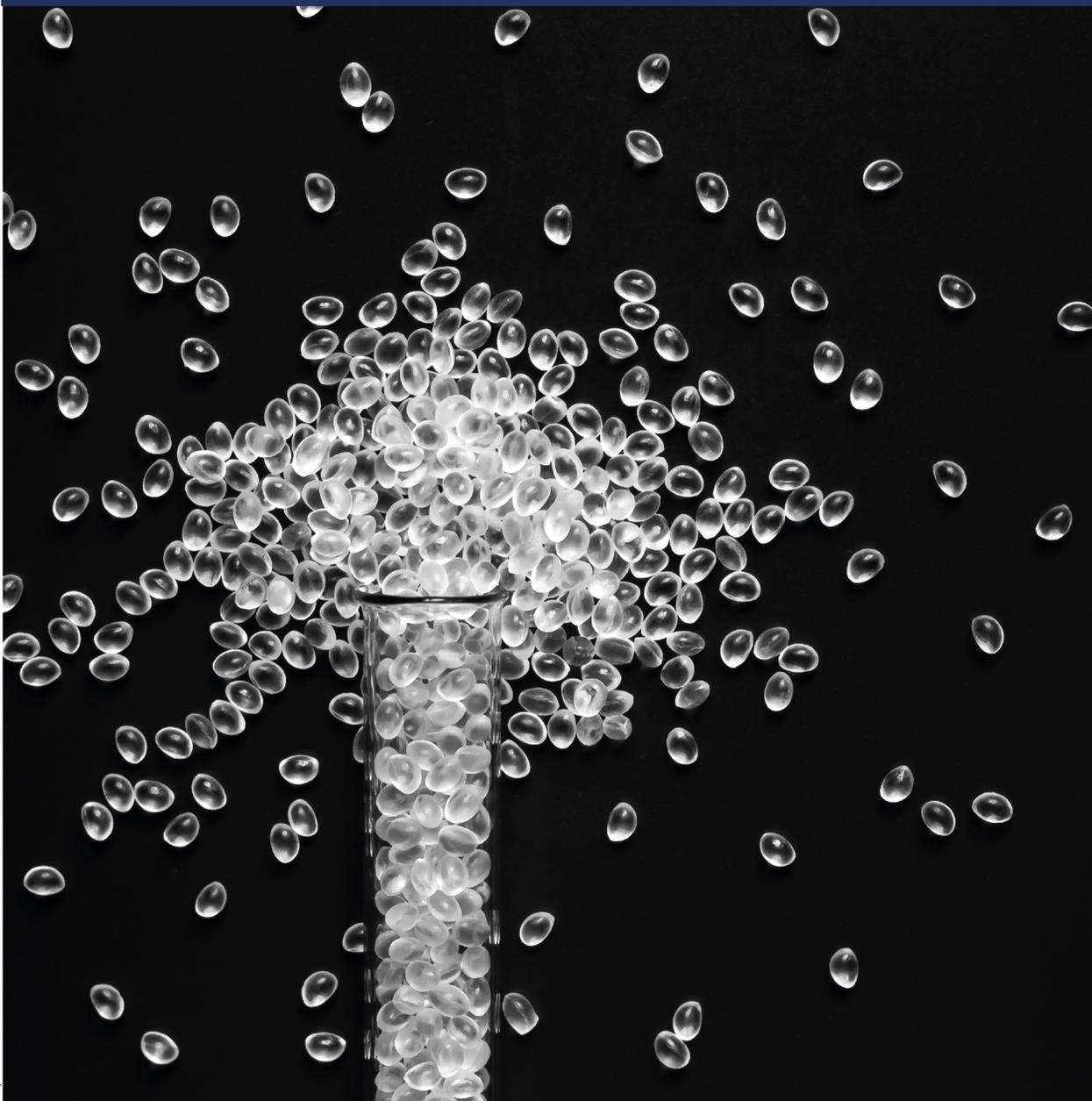


**IQ MADEN**  
Plastic Sheets Factory



# POLYCARBONATE SHEETS

Catalogue



## About Us: IQ MADEN FACTORY

In 2020, IQ Maden Factory Company For trade and Industry, Became Active in the World market of **POLYCARBONATE** Sheets with its trademark **LEXAN** Since then IQ Maden makes production without making concession on quality by using advanced technology and continues with the principle to increase its success constantly.



## Raw Materials:

All our raw materials polycarbonate are from Sabic 100% pure raw materials.

سابك  
عندك

# Polycarbonate Solid & Embos Sheets:

1

## Solid Sheets:

Solid Sheets combine Ultra-high impact resistance with transparency and are the materials of choice by demanding construction applications. Under normal conditions, They are virtually unbreakable transparent as glass and less than half the weight of glass. Solid PC Sheets can be bent cold and ideal for barrel vault roofing skylights,architectural roofing and also very suitable as machine guards, Sound barriers, Anti-Vandal and safety glazing materials.

Our Embossed PC Sheets that are similar to Solid sheets have a texture diffusing the natural light streaming in, ensure uniform dispersion of light over a large area and prevent glare.

Furthermore, Embossed sheets have ability to perform in wide range of temperature and make the sheets excellent for light fixtures that heat up after long usage.

2

## Main Benefits:

- High impact resistance – Virtually unbreakable.
- High clarity and light transmission
- Weather and UV resistant
- Wide service temperature range
- Blocks harmful UV radiation
- Good acoustical insulation
- Light weight
- Easy to handle and install
- Versatile,formable,and machinable
- A 10 year,limited warranty that guaranties no yellowing light transmission and mechanical properties



3

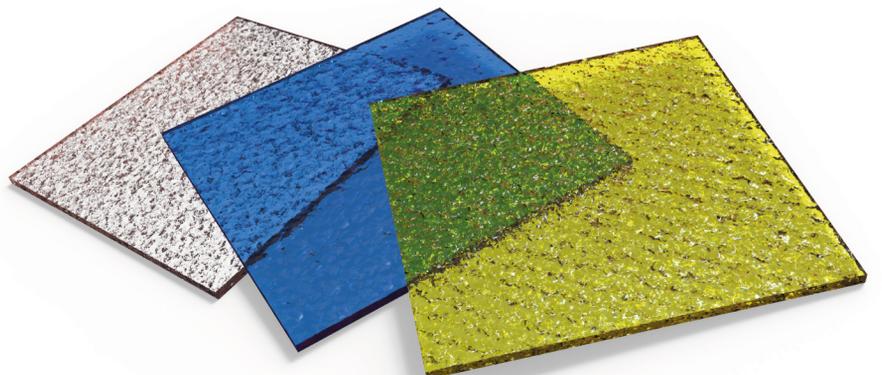
## Typical Applications:

- **Architecture:** Transparent acoustic barriers,sport venues,skylights,shopping centers,covered walkways.
- **Construction:** Sun rooms and conservatories,pergolas and covered patios.
- **Safety and Security Glazing:** Safety glazing,machine guards, bus stops and telephone booth.
- **Shields for police And security forces:** Glazing in public transportation, Saftey windshields for cars, eye protection visors for helmets.

4

## Decorative Solutions:

In the last years, Polycarbonate has become the most used material being used in many markets extensively. Especially through its physical and chemical specifications, it succeeds to gain various advantages in each field. Polycarbonate materials have a quite flexible structure and under favour of that, one can form them as required by bending them cold or hot. With various colours and designs, Polycarbonate sheets bring an aesthetic and modern look to places.



# Polycarbonate Sheet Advantages

Polycarbonate Sheet is one of the most special and perfect gifts presented to construction sector by the New Generation Product Solutions, because of its countless advantages on side plating and skylights. It is much more stronger, much more aesthetic and has a much more easier application property. The reasons for preference are its economical price and long-lasting life. With the partnership of General Electrics and BAYER, the synthesizing of Polycarbonate was realized the first time and its international abbreviation is PC.

Because of being normally a transparent plastic, its light transmission is close to the one of glass. Its resistance is high against very hot and very cold temperature, chemical materials and scratching. It is suitable for thermoforming and cold bending. It has a protection against the ultraviolet effect and is not affected by outdoor conditions. **It is much lighter and 250 times stronger than glass, because it is produced with high-quality raw material.**

PC sheets are materials in various thicknesses. Through lightings of big places in vault, cornered, pyramide, dome forms and other architectural innovation possibilities, they became an irreplaceable part of the Modern Production Market.



# Applicant Exampels:



Canopies made of polycarbonate sheets gain living places with brighter and more decorative appearance.

Another feature of the Polycarbonate sheets is that they can not only protect your woodwork and home appliances but also prevent colour fading by filtering 100%ly the UV shines of the sun.



One of the main materials by pool cover systems are the PC sheets.

The most important advantage for using them is that they do not need any maintenance and repair for years. The other extra properties of them are thermal insulation 90% of light transmission and protection against harmful UV rays. furthermore, the PC sheets decrease the pool chemical wastage to minimum level, because their pool cover avoids the polution of the pool. In case of wishes not to be "seen inside, they also provide differentiation and specialisation with color alternatives through special designsd.



For the coverage,one can use transparent multiwall sheets and by demand, one can applicate acrylic and solid sheets at the side and top walls.



**Noise is one of the external factors that affect human health negatively.**

Polycarbonate sheets are used by professionals as pitches being one of the economic and decorative options.

PC sheets with UV protection on both surfaces are widely used as sound insulation at noisy places like highways, Urban secondary, roads, railways, airports environment and near to residential areas.



**Another area for PC sheets are the public transport stops mainly because they are light, flexible, durable and can be bended hot and cold.**

Besides, they have positive effects on human health by reflecting back the harmful sun rays owing to UV protection. The light transmission values change according to the thicknesses and colors of the sheets, but with a light transmission of 90%, they are an unrivaled product.



# Polycarbonate Sheets

## SPECIFICATIONS

Typical Properties	Unit	Value	Test Method
<b>GENERAL</b>			
Density	gm/cc	1.2	ASTM D 972
Flammability	mm	148	UL 94
Oxygen Index	%	28	ASTM D 2863
Water Absorption	%	< 0.45	ASTM D 570
<b>MECHANICAL</b>			
Tensile Strength at Yield	Mpa	60	ASTM D 638
Tensile Strength at Break	Mpa	70	ASTM D 638
Elongation at Yield	%	6	ASTM D 638
Elongation at Break	%	125	ASTM D 638
Tensile Modulus	Mpa	2400	ASTM D 638
Flexural Strength	Mpa	100	ASTM D 790
Taber Abrasion	mg/1000 cycles	10	ASTM D 1044
Charpy Impact Notched	kJ/m <sup>2</sup>	40	ASTM D 256
Izod Impact Notched	kJ/m <sup>2</sup>	75	ASTM D 256A
Impact Resistance	joules	72	ASTM F 736
<b>THERMAL</b>			
Vicat Softening Point	°C	148	ASTM D 1525
Heat Deflection Temperature	°C	132	ASTM D 648
Thermal Index-Electrical Properties	°C	100	UL 746 B
Thermal Index-Mechanical Properties	°C	120	UL 746 B
Coefficient of Linear Thermal Expansion	mm/m°C	0,065	ASTM D 696
Shrinkage	%	< 3	BSEN ISO
<b>ELECTRICAL &amp; OPTICAL</b>			
Volume Resistivity	Ohm.cm	> 1.E+15	ASTM D 257
Dielectric Strength	kv/mm	30	ASTM D 149
Dissipation Factor 1 MHz		0.01	ASTM D 150
Light Transmission	%	>85	ASTM D 1003
Haze	%	<1	ASTM D 1003
Refractive Index		1.59	ASTM D 542
<b>CHEMICAL</b>			
- Acetone	- Alcohol (96 %)	+ Allyl Alcohol	+ Ammonium Chloride
x Aniline	+ Arsenic Acid	- Ammonia (25%)	x Aldehyde
x Benzene	- Benzene	- Bromine Vapors	x Chlorine Vapors
+ Chromium Acid (20%)	+ Ester	x Fluorine Vapors	+ Formaldehyde (10-40%)
x Glycerine	+ Iodine	x Hexena	+ Ketones
- Phenole	+ Lanolin	- Methanol	+ Water
- Fuel Mixture	+ Mineral Oil	- Sodium Hydraxide	- Phosphoric Acid (85%)
- Hydrochloric Acid	x Acids (up to 20%)	- Carbon Tetrachloride	

\*+\*= no change, "X" = conditionally resistant, "-" = not resistant

# Polycarbonate Sheets



## PC SOLID SHEETS

Thickness	Overall Thickness Tolerance	Max Width	Standard Length	Width & Length Tolerance	Min. Bending Radius	U Value	Light Transmittance			Color
							Clear	Bronze	Opal	
1	{+/-}0,15	1250	3050	{-0,1%;+0,3%}	180	5,72	92 %			Any Color Can be Customized.
1,5	{+/-}0,15	1250	3050		270	5,64	92 %			
2	{+/-}0,2	2100	3050		360	5,56	92 %			
3	{+/-}0,3	2100	3050		540	5,41	92 %	45-50%	30-35%	
4	{+/-}0,3	2100	3050		720	5,27	92 %	45-50%	30-35%	
5	{+/-}0,3	2100	3050		900	5,13	92 %	40-50%	25-35%	
6	{+/-}0,3	2100	3050		1080	5,00	90 %	40-50%	25-30%	
8	{+/-}0,4	2100	3050		1440	4,76	88 %			
10	{+/-}0,4	2100	3050		1800	4,55	80 %			
12	{+/-}0,4	2100	3050		2160	4,35	80 %			

## PC SOLID SHEETS

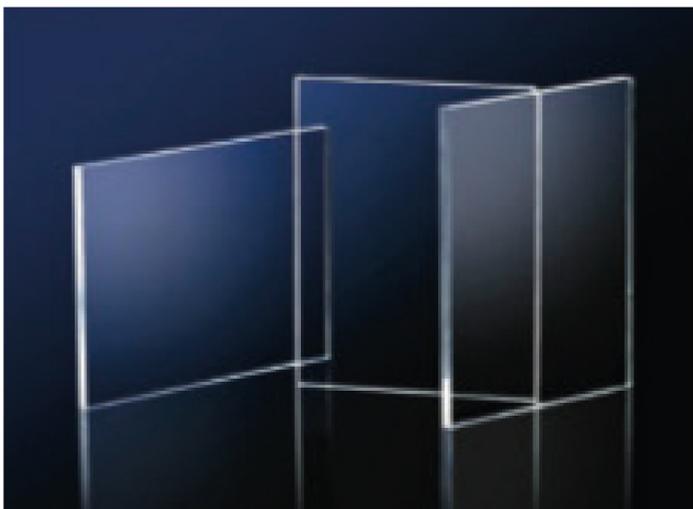
Sheet Thickness	(kg/m <sup>2</sup> )	Glas (kg/m <sup>2</sup> )
1	1,2	2,5
1,5	1,8	3,75
2	2,4	5
3	3,6	7,5
4	4,8	10
5	6	12,5
6	7,2	15
8	9,6	20
10	12	25
12	14,4	30

## ACOUSTIC VALUES (EN14388)

Thickness	Sound Reduction
8 mm	28
10 mm	31
12 mm	34

## LEXAN Polycarbonate Solid Sheets Application Places

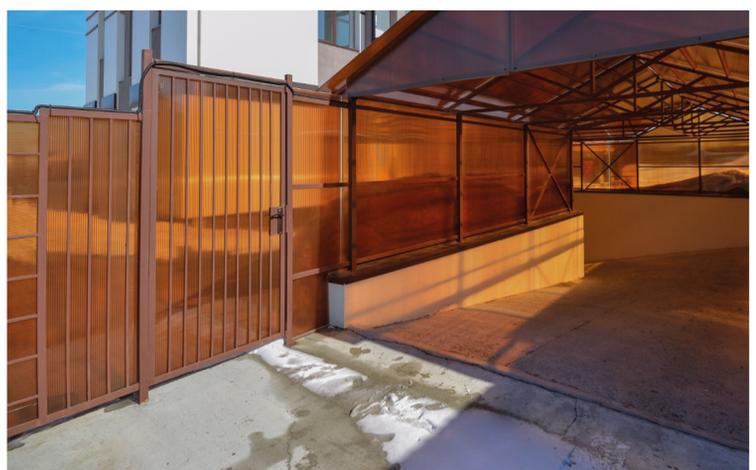
- \* As Building Windows
- \* As Roof Skylights & Wall Panels
- \* Clear Room Panels
- \* As Panels at Places Open To The Public, Stadiums, Sport Center, Esplanades Open to Traffic
- \* In Lighting and Electricity Sectors; on Billboards at Bus Stops, On Stand Panels
- \* On Electricity and Lighting Fittings
- \* On each Kind of Windows and Translucent Sections (train, bus, vessel, yacht, air vehicles, car sunroof,...)





# Polycarbonate Sheets

PC EMBOSSED SHEETS						
	Thickness (mm)	Thickness Tolerance	Max. Width (mm)	Standard Length (mm)	Width & Length Tolerance	Color
Diamond	1,5 mm - 10 mm	(+/-) 0,3	2100	3050	(-0,1%,+0,3%)	Any Color Can Be Customized
Rain Drop						
Matt						



Perfect Heat Insulation



Protection Against UV



Sound Insulation



Resistance Against Cracking



Protection Against Natural Conditions



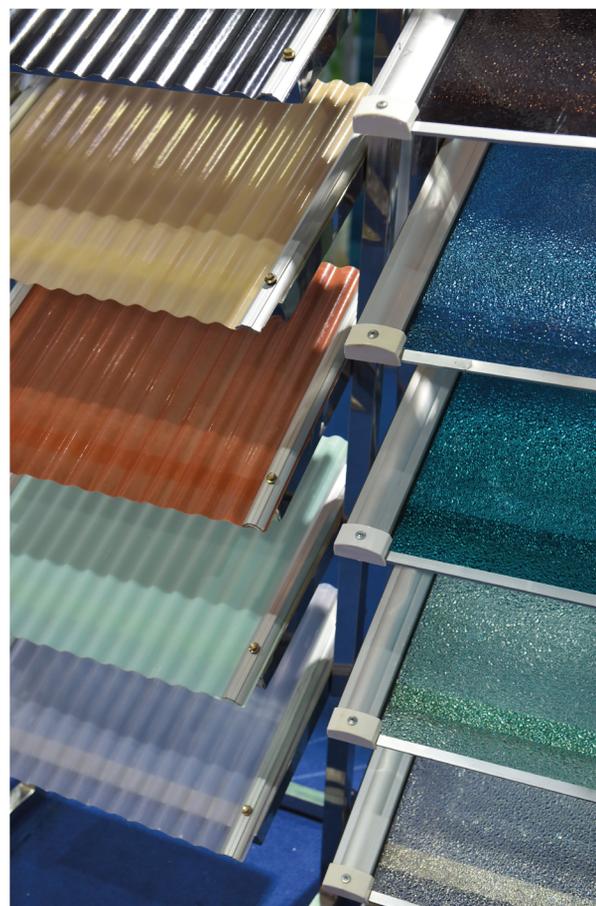
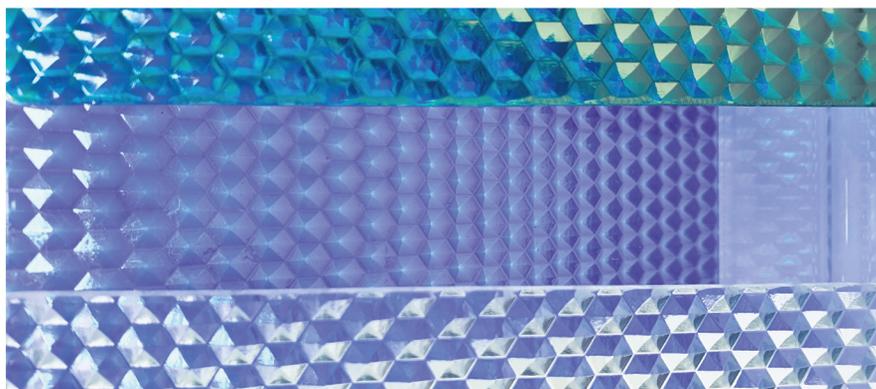
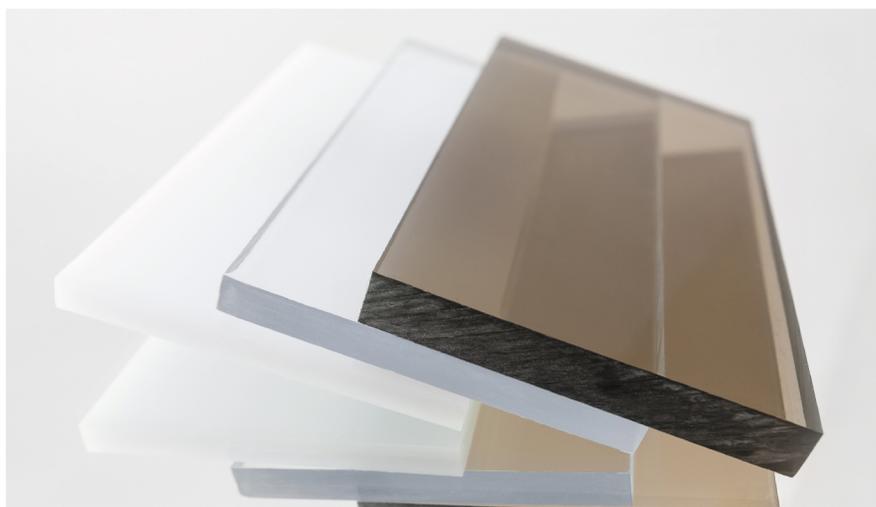
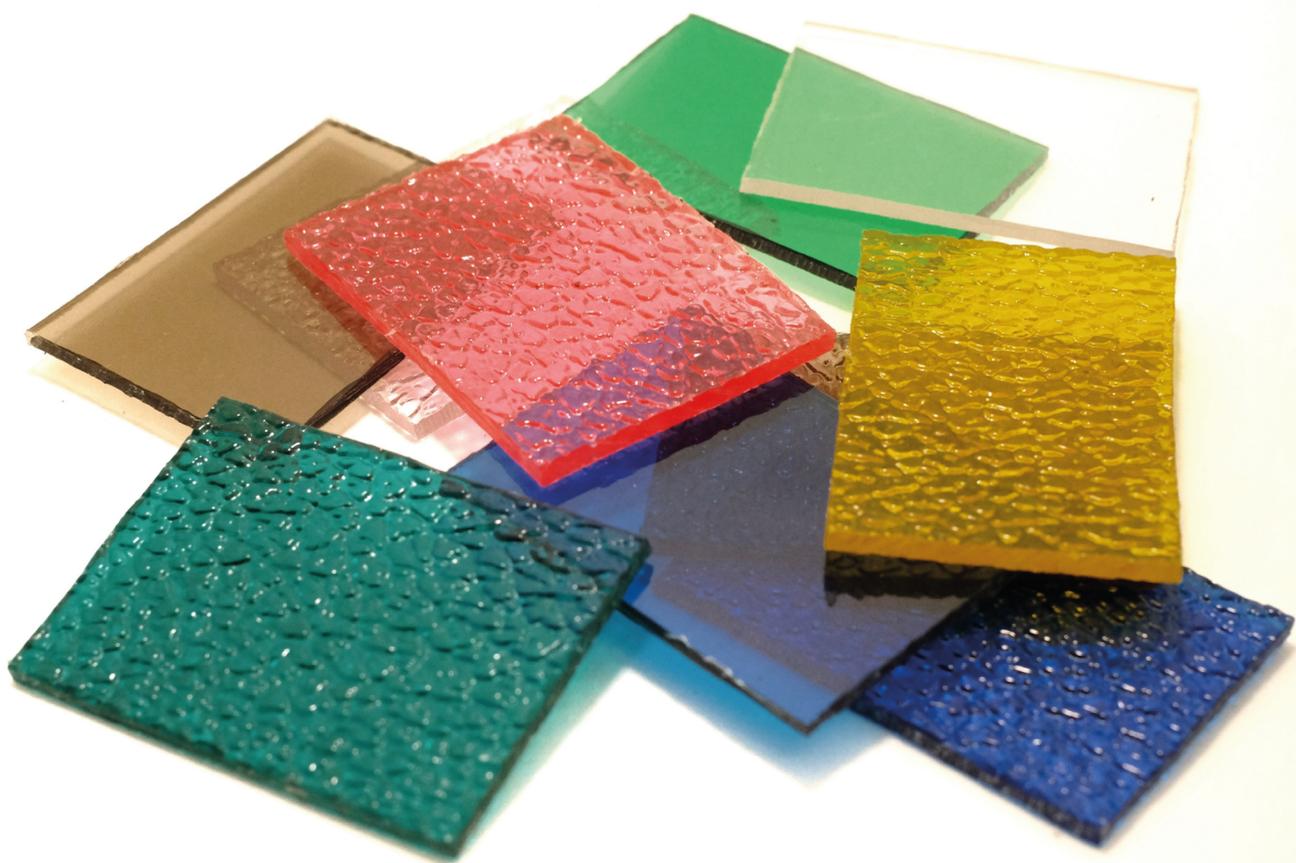
Diffuse Reflection



Blocking The IR

# Applications

10  
Year  
Warranty



10  
Year  
Warranty

# Application



10  
Year  
Warranty



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