

# PLASKOLITE

**TUFFAK®**

EXTRUDED POLYCARBONATE  
(PC) SHEETS

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SOLID SHEETS 



# TUFFAK EXTRUDED POLYCARBONATE SHEETS

TUFFAK Polycarbonate sheets are extruded from resin which produces a virtually unbreakable sheet. These transparent sheets are optically clear, heat resistant, UV enhanced one or two sides for excellent outdoor weatherability for the most demanding applications.

TUFFAK Sheets are produced according to EN 16240:2013 standard.

## Main Advantages

- » High clarity and light transmission
- » Excellent impact strength
- » Ductile - excellent toughness
- » Excellent stiffness and strength
- » Excellent dimensional stability - high heat resistance
- » Lightweight, half the weight of glass
- » Can be UV protected, excellent weathering and ageing resistance. excellent weatherability
- » Ten (10) year Limited Product Warranty
- » Easily handled, machined and thermoformed
- » Cold curving capability
- » No hazardous substances
- » Excellent fire behavior: self-extinguish
- » Environment friendly-100% recyclable
- » REACH and RoHS declarations

## Dimensions

**Thickness** 0.5 – 19.0 mm

**Width** 1000, 1220, 1250 and 2050 mm

**Length** 600 – 6000 mm

All sheets are also available cut to size, according to customer requirements.

**Colors:** Transparent, white opaque, opal, diffusers, black, grey, green, brown and blue.

### Grades:

TUFFAK F - Fire retardant grade. V0 according to UL94 for specific thicknesses.

TUFFAK IR Solar - Blocks IR light transmission reducing the heat load across the sheet.

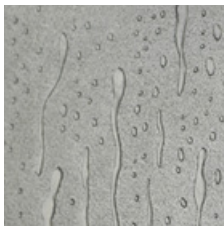
TUFFAK TOP - Clear sheets specially designed for optical applications. Available from 0.5 to 2.0 mm thickness, limited to specific sizes.

TUFFAK FA - Special PC grade, non UV-protected or stabilized, produced from food contact approved raw materials.

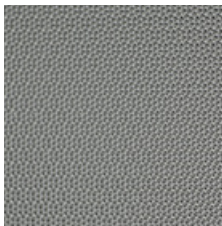
Chairmat - Textured polycarbonate sheets specially designed for chair mats.

## Embossing Patterns

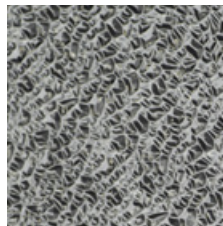
TUFFAK sheets are available with different embossing patterns (limited to specific thicknesses and sizes)



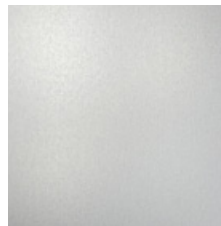
Aqua



Pinspot



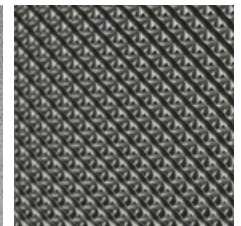
Cracked



Non Reflective

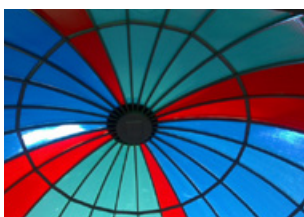


G-Tech



K-12

## Applications



Glazing



Roofing and windows



Noise reduction barriers



Lighting, Illumination and signage



Sky light / Domes



Wind shields



Safety



Automotive

TYPICAL PROPERTIES	METHOD	UNITS	VALUES (R8000)
<b>GENERAL</b>			
Density	ISO 1183	g/cm <sup>3</sup>	1.2
Water Absorption	ISO 62 (1)	%	0.15
Flammability (thickness dependent)	UL94		HB,V2
Flammability (2-5 mm)	Euroclass EN13501		B,s1,do
<b>MECHANICAL</b>			
Tensile Strength	ISO 527-2	MPa	60
Elongation at break	ISO 527-2	%	<100
Tensile Modulus	ISO 527-2	MPa	2300
Flexural Strength	ISO 178	MPa	90
Flexural Modulus	ISO 178	MPa	2300
Impact Resistance (Charpy unnotched)	ISO 179/1fu	kJ/m <sup>2</sup>	No Break
Impact Resistance (Izod notched)	ISO 180/1A	kJ/m <sup>2</sup>	>65
<b>OPTICAL</b>			
Refractive Index	ISO 489		1.585
Light Transmission (thickness dependent)	ASTM D1003	%	81-90
Haze (3mm transparent sheet)	ASTM D1003	%	<1
<b>THERMAL</b>			
Vicat Softening Temp.(50N)	ISO 306	°C	144
Heat Deflection Temp. (1.82 MPa)	ISO 75-1	°C	130
Coeff. of Linear Thermal Expansion (0-500C)	ISO 11359-2	µm/m°C	65
Thermal Conductivity	ASTM C177	W/mK	0.2
Maximum Continuous Service Temp.		°C	85
Maximum Short Time Service Temp.		°C	120
Short Time Service Temp. K-12		°C	-40
<b>ELECTRICAL</b>			
Dielectric Constant (50Hz)	DIN 53483		3.0
Dissipation Factor tanδ (100Hz)	DIN 53483		0.0006
Dissipation Factor tanδ (1MHz)	DIN 53483		0.009
Surface Resistivity	IEC 60093	Ohm	>10 <sup>14</sup>
Volume Resistivity	IEC 60093	Ohm.cm	>10 <sup>15</sup>

Please note that the technical values given in the table are typical values for guidance and they are subjected to certain variability.

# PLASKOLITE

## A GLOBAL LEADER IN THE PRODUCTION OF THERMOPLASTIC SHEET

FOUNDED IN 1950

Our Mission: to deliver superior thermoplastic sheet, coatings and polymers to the world, through long-lasting customer relationships and hands-on customer service.

### MANUFACTURING LOCATIONS



From our founding, PLASKOLITE strives to treat our employees, our customers, our community and the world, with kindness, dignity and respect. This drives our continuing effort to create sustainable products, in a sustainable manner, for future generations. This on-going commitment is expressed in the

#### PLASKOLITE Sustainable Ecosystem:

#### QUICK FACTS

**STATUS:** Privately held

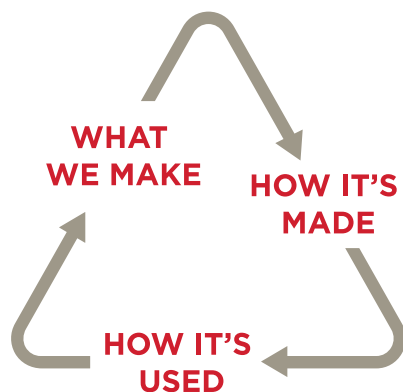
**GLOBAL HEADQUARTERS:** Columbus, OH

**EMPLOYEES:** 1900 Worldwide

**MARKETS SERVED:** Signage, Lighting, Retail Display, Construction, Transportation, Security, Bath & Spa, Industrial, Architecture, Green Houses

## OUR PILLARS OF SUSTAINABILITY

### EACH CONTRIBUTES TO MAKING THE WORLD A BETTER PLACE



#### WHAT WE MAKE

Versatile, high-quality, durable thermoplastic materials...not single-use plastics

#### HOW IT'S MADE

How we make our products reflects our overall philosophy of continuous environmental improvement

#### HOW IT'S USED

Our thermoplastics play an important role in advancing human well-being, energy conservation and quality of life

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control. We recommend that the prospective user determines the suitability of our materials and suggestions before adopting them on a commercial scale.

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