

## Description

Lexan\* F2500 sheet is a transparent Polycarbonate sheet which is Eco FR according the VDE norm passing V0 at 2.0mm. In addition to good flammability performance, it offers excellent impact resistance, high optical quality, good stiffness and strength and ease of processing, making it an excellent candidate for a wide variety of applications in the electrical, electronic and transportation.

## Typical Property Values ♦

Property	Test Method	Unit	Value
<b>Physical</b>			
Density	ISO 1183	g/cm <sup>3</sup>	1.20
Water absorption, Equilibrium	ISO 62	%	0.35
<b>Mechanical</b>			
Tensile strength,	ISO 527	MPa	65
Tensile modulus	ISO 527	MPa	2000
Tensile elongation, yield	ISO 527	%	6
Tensile elongation, break		%	110
Flexural strength, yield	ISO 178	MPa	115
Flexural modulus	ISO 178	MPa	2350
Izod Notched Impact 23 °C	ISO 180/1A	kJ/m <sup>2</sup>	40
-30 °C		kJ/m <sup>2</sup>	37
-Gardner Impact 23°C	ISO 179/1A	kJ/m <sup>2</sup>	>40
<b>Thermal</b>			
Vicat Softening Temp, Rate B/ 120	ISO 306	°C	145
Heat Deflection temperature 0.45 MPa	ISO 75/Be	°C	138
Thermal conductivity	ASTM C 177	W/m°C	0.2
Ball Pressure Test 75 °C	IEC 335-1		Pass
Ball Pressure Test 125 °C	IEC 335-1		Pass
Mold shrinkage	ISO 527	%	0.5-0.7
Thermal expansion	ASTM D696	1/ °C	7.10 <sup>-5</sup>
<b>Electrical</b>			
Hot Wire Ignition	UL 746A	sec	44
High Voltage Arc Tracking Rate	UL 746A	mm/s	5.2
High Ampere Arc Ign. Surface	UL 746A		44
Comparative Tracking Index,	IEC 112/3	V	200
Volume Resistivity	IEC 93	Ohm.cm	>10 <sup>15</sup>
Surface Resistivity	IEC 93	Ohm	>10 <sup>15</sup>
Dielectric Strength	IEC60243-1	KV/mm	27
Relative permittivity	IEC60250	50Hz	2.7
<b>Flammability</b>			
Limited Oxygen Index	ISO 4589	%	34
Glow Wire Test, 960 °C	IEC695-2-12		Pass
UL94 V0 2.0mm	IEC695-11-10		pass V0 2 mm
<b>Optical</b>			
Light Transmission	ASTM D1003	%	90
Taber Abrasion, CS10F, 500g, 100 cycles	ASTM D1044	% Haze	36

♦ These property values have been derived from Lexan\* resin data for the material used to produce this sheet product.

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## Processing

Lexan\* F2500 sheet is ideally suited to thermoforming. It offers high, deep draw ratios, equal wall thickness distribution, and it can be formed into complex shapes using standard thermoforming equipment. Sandwich type heating systems give the best results. Lexan F2500 sheet has a forming temperature range of 185 - 205°C. When forming, a draft angle of at least 3° should be allowed, and post mold shrinkage of 0.5 - 1.0% taken into account.

## Pre-drying

It is important to ensure that Lexan F2500 sheets are free of moisture prior to thermoforming. A hot air circulating oven set at 120°C is recommended. Pre-drying times vary from 3-24 hours, depending on sheet thickness.

## Assembling

Parts made from Lexan F2500 sheet can be assembled with plastics, metals, rubber and other materials using many types of adhesive bonding, welding and mechanical fastening techniques. Since some of these materials can cause environmental stress cracking, please consult SABIC Innovative Plastics for advice on specific applications.

## Painting

For either functional or decorative reasons it may be necessary to apply finish to Lexan F2500 sheets or vacuum formed parts. The product is ideally suited for use with a wide variety of modern decoration techniques. A list of approved paint systems and suppliers is available upon request.

## Chemical Resistance

Lexan F2500 sheet has sufficient resistance to most mineral oils, greases, aliphatic hydrocarbons and acids under low or moderate stress levels. In applications where the Lexan F2500 sheet will come into contact with aggressive chemicals, specific (application related) testing is always advised. Effective painting systems can improve chemical resistance

## Product Availability

<b>Product code:</b>	Lexan F2500 Sheet
<b>Standard size:</b>	1250 x 2050mm
<b>Gauges:</b>	1.5 to 6.0 mm
<b>Textures:</b>	Polished/Polished
<b>Colors:</b>	Clear 11255

Other colors/sizes are available by special request.



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