



## Product Data Sheet

# Lexan® 9600

### Description

Lexan® 9600 sheet offers all the benefits of standard, transparent polycarbonate sheet - excellent impact resistance, good stiffness and strength, relatively light weight - but it has significantly better flammability characteristics, making it suitable for a wide variety of applications in the transportation, electrical and electronic industries.

Lexan® 9600 sheets provide:

- High impact resistance
- Excellent flammability performance
- High optical quality
- Excellent formability

### Processing

Lexan® 9600 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® 9600 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 0.6 - 0.8% taken into account.

### Chemical resistance

Lexan® 9600 sheet has sufficient resistance to most mineral oils, greases, aliphatic hydrocarbons and acids under low or moderate stress levels.

In applications where the Lexan® 9600 sheet will come into contact with aggressive chemicals, specific (application related) testing is always advised. Effective painting systems can improve chemical resistance.

### Pre-Drying

It is important to ensure that Lexan® 9600 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® 9600 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 GE Structured Products for advice on specific applications.

### Painting

Lexan® 9600 sheet 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.

### Fire Test Performance

Lexan® 9600 has good fire performance against many national fire codes dependent on thickness and colour; please check with the local sales office for details.

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## Typical Properties

Property	Testmethod	SIUnit	Value*
<b>Physical</b>			
Density	ISO 1183	g/cm <sup>3</sup>	1.20
Water absorption, equilibrium, 23°C	ISO 62	%	0.35
Rockwell Hardness	ASTM D785		M74
<b>Mechanical</b>			
Tensile Strength, yield	ISO 527	MPa	60
Tensile Strength, break	ISO 527	Mpa	70
Tensile modulus	ISO 527	MPa	2350
Tensile elongation, break	ISO 527	%	120
Flexural strength, yield	ISO 178	Mpa	90
Flexural modulus	ISO 178	MPa	2300
Izod notched impact, 23°C	ISO 180/1A	kJ/m <sup>2</sup>	65
Gardner impact, 23°C	ASTM D3029	J	>40
Gardner impact, -30°C		J	>40
Taber Abrasion, CS17, 1000g, 1000cycles	ASTM D1242	mg	9
<b>Thermal</b>			
VICAT softening temp., rate B/120	ISO 306	°C	145
DTUL, 0.45 Mpa	ISO 75/Be	°C	138
Thermal Conductivity	ASTM C177	W/m°C	0.20
Mold Shrinkage	ISO 527	%	0.6-0.8
Coefficient of Thermal expansion	ASTM D696	1/°C	7x10 <sup>-5</sup>
<b>Electrical</b>			
Dielectric Strength	IEC 60243	kV/mm	17
Dielectric Constant, 60Hz			3.17
Dielectric Constant, 1 MHz			2.96
Dissipation Factor 50Hz	ASTM D150		0.001
Dissipation Factor 1MHz			0.01
Volume Resistivity, 23°C	IEC 60093	Ohm.cm	>10 <sup>15</sup>

\* Typical values only. Variations within normal tolerances are possible for the various textures.



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