

Description

Lexan* 9600 sheet offers all the benefits of standard, transparent polycarbonate sheet - excellent impact resistance, good stiffness and strength, high optical quality, excellent formability, 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.

Typical Property Values ♦

Property	Test Method	Unit	Value
PHYSICAL			
Specific Gravity	ASTM D792	—	1.25
Water Absorption, Equilibrium, 24 Hrs	ASTM D570	%	0.20
Light Transmission (avg.), .125" thickness	ASTM D1003	%	85
MECHANICAL			
Tensile Strength	ASTM D638	psi	
@ Yield			9,500
Ultimate			9,000
Elongation	ASTM D638	%	95
Tensile Modulus	ASTM D638	psi	235,000
Flexural Strength	ASTM D790	psi	13,500
Flexural Modulus	ASTM D790	psi	370,000
Compressive Strength	ASTM D695	psi	12,500
Dynatup Impact Strength, 1/2" dia. dart, (gauge dependant)***, @ 73°F	ASTM D3783	ft-lbs	50
Gardner Impact Strength, round tup (gauge dependant)***, @ 73°F	ASTM D3029	in-lbs	>320
Izod Impact Strength, (gauge dependant)*** Notched @ 73°F	ASTM D256A	ft-lbs/in	2.4
Unnotched @ 73°F			NB
THERMAL			
Coefficient of Thermal Expansion	ASTM D696	in/in/°F	3.75 x 10-5
Heat Deflection Temperature @ 264 psi	ASTM D648	°F	280
FLAMMABILITY			
UL Flammability**	UL 94	—	V-0 (90 mils and above) V-2 (34-89 mils)
FAA Flammability @ 40 to 125 mils	FAR 25.853	—	Passes A&B
ATS 1000 @ 40 to 125 mils	—	—	Pass

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

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** This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

*** Reported values based on .125" gauge thickness.

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.

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 SABIC Innovative Plastics 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 on request.

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

Fire test performance

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



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