SABIC Innovative Plastics™

Lexan* V200 Sheet

Product Datasheet

Description

Specifically designed for vending machine fronts, Lexan V200 sheet is a clear extruded polycarbonate sheet with a polished surface. Lexan V 200 sheet offers outstanding clarity and impact resistance, together with ease of fabrication and decoration. Lexan V 200 sheet is ideally suited for flat or curved vending machine fronts.

Typical Property Values ◆

Property	Test Method	Unit	Value
Physical			
Specific Gravity	ASTM D792	–	1.20
Refractive Index @ 77°F	ASTM D542A	-	1.586
Light Transmission (Average), 1/8" disk	ASTM D1003	%	88
Rockwell Hardness	ASTM D785	-	M70
Abrasion Resistance, Taber Abrader, CS-17 wheel	ASTM D1044	mg/1,000 cycles	10
Water Absorption, Equilibrium, 24 Hrs	ASTM D570	%	0.15
@ 73° F			0.35
@ 212° F			0.58
Mechanical			
Tensile Strength @ Yield	ASTM D638	psi	9,000
@ Ultimate			9,500
Tensile Modulus	ASTM D638	psi	345,000
Flexural Strength	ASTM D790	psi	13,500
Flexural Modulus	ASTM D790	psi	345,000
Flexural Endurance	ASTM D671	psi	
@ 1,800 cycles/min, 73°F, 50% RH			1,000
Compressive Strength	ASTM D695	psi	12,500
Compressive Modulus	ASTM D695	psi	345,000
Elongation	ASTM D638	%	110
Poisson's Ratio	-	-	0.37
Izod Impact Strength, Notched @ 1/8"	ASTM D256A	ft-lbs/in	12–16
Unnotched @ 1/8"			60 (no failure)
Tensile Impact Strength, S-Type Specimen	ASTM 1822	ft-lbs/in2	225–300
Shear Strength @ Yield	ASTM D732	psi	6,000
@ Ultimate			10,000
Shear Modulus	ASTM D732	psi	114,000
Deformation Under Load @ 4,000 psi, @ 73°F	ASTM D621	%	0.2
@ 158°F			0.3
Thermal			
Coefficient of Thermal Expansion	ASTM D696	in/in/°F	3.75×10^{-5}
Coefficient of Thermal Conductivity	ASTM C177	Btu/hr/ft²/°F/in	1.35
Specific Heat @ 40°C		cal/gm/°C	0.30
Heat Deflection Temperature, @ 264 psi	ASTM D648	°F	270
@ 66 psi			280
Brittle Temperature	ASTM D746	°F	–211
Electrical			
Dielectric Constant, @ 60 Hz	ASTM D150		3.17
@ 1,000,000 Hz			2.96
Volume Resistivity	ASTM D257	ohm-cm	8.2×10^{16}
Power Facto , @ 60 Hz	ASTM D150		.0009
@ 1,000,000 Hz			.0010
Arc Resistance, Stainless Steel Strip Electrodes	ASTM D495	sec	10-11
Tungsten Electrodes			120
Flammability			
Horizontal Burn (Flame Spread), AEB	ASTM D635	in	<1

◆ These typical values are not intended for specification purposes. If minimum certifiable properties are required please contact your local SABIC Innovative Plastics, Specialty Film & Sheet representative

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Processing

Lexan V200 sheet can be used for 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 V200 sheet has a forming temperature range of 350–400°F. When forming, a draft angle of at least 3° should be allowed, and post mold shrinkage of .007–.009 in/in taken into account.

Pre-drying

It is important to ensure that Lexan V200 sheet is free of moisture prior to thermoforming. A hot air circulating oven set at 250°F is recommended. Pre-drying times vary from 3–24 hours, depending on sheet thickness.

Assembling

Parts made from Lexan V200 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 V200 sheet is well-suited for use with a wide variety of decoration techniques. A list of approved paint and ink systems and suppliers is available upon request.

Chemical Resistance

Lexan V200 sheet has sufficient resistance to most mineral oils, greases, aliphatic hydrocarbons and acids under low or moderate stress levels. Specific (application related) testing is always advised, especially in applications where the Lexan V200 sheet will come into contact with aggressive chemicals.

Product Availability

Product code:	Lexan V200 sheet
Standard gauges:	.060″, .110″
Standard length:	80″
Textures:	V200 - Polished/Polished, polystick masking
Colors Standard:	Clear 112

Lexan* Polycarbonate Sheet — Tough Virtually Unbreakable

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