

Description

Lexan* TF6000 sheet is a flame retardant opaque polycarbonate sheet, laminated with DuPont™ Tedlar® PVF Film. Lexan provides excellent impact, flame properties, and formability, while the PVF film first surface gives the sheet excellent chemical resistance and cleanability. Typical applications for the product include aircraft window shades. Potential applications in rail interiors.

Typical Property Values ♦

Property	Test Method	Unit	Value
Physical			
Specific Gravity	DIN 53479	-	1.21
Water Absorption, 24hrs equilibrium	ASTM D570	%	0.15
		%	0.35
Mechanical			
Tensile Strength, yield	DIN 53455	psi (Mpa)	9,000 (62)
Tensile Modulus	DIN 53457	psi (Mpa)	320,000 (2200)
Elongation, Yield	DIN 53455	%	7
Break		%	95
Flexural Strength, Yield	DIN 53452	psi (Mpa)	13,000 (90)
Flexural Modulus	DIN 53457	psi (Mpa)	325,000 (2240)
Izod Notched Impact, 20°C	ASTM D256	ft-lb/in (J/m)	12 (640)
-20°C		ft-lb/in (J/m)	2 (100)
Gardner Impact, 20°C	SABIC Method	ft-lb (J)	>30 (>40)
-40°C		ft-lb (J)	>30 (>40)
Taber Abrasion, CS17, 1000g, 1000cycles	ASTM D1044	ounce (mg)	3.5x10 ⁻⁴ (10)
Thermal			
Vicat Softening Temperature, Rate B/120	DIN53460	°F (°C)	293 (145)
Mold Shrinkage	ASTM D1299	%	0.5 - 1.0
Thermal Expansion	VDE 0304/1	1/ °F (1/°C)	3.75x10 ⁻⁵ in/in (6.8x10 ⁻⁵ m/m)
Flammability			
NBS Smoke, flaming mode, DS, 1.5min	ASTM E662		<50
DS, 4.0min			<100
FAA Flammability	FAR 25.853		
	(a), 1, (i) &(ii)&(iv)	in (mm)	Pass <0.120 (<3)
Toxicity ABD0031			Pass
Toxicity BSS7239			Pass

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

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Processing

Lexan TF6000 sheet is suited to thermoforming. It offers moderate 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 TF6000 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 TF6000 sheets are free of moisture prior to thermoforming. A hot air circulating oven set at 120°C is recommended. Pre-drying times vary from 3-12 hours.

Assembling

Parts made from Lexan TF6000 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, Film & Sheet representative for advice on specific applications.

Chemical resistance

Lexan TF6000 sheet has improved resistance compared to Lexan F6000 sheet to most mineral oils, greases, aliphatic hydrocarbons including reference fuel C, detergents and sprays, and acids under low or moderate stress levels. In applications where the Lexan TF6000 sheet will come into contact with aggressive chemicals, specific (application related) testing is always advised.

Product Availability

Product code: Lexan TF6020 – 2 mil (0.05 mm) color matched film
Lexan TF6010 – 1 mil (0.025 mm) clear film

Colors: WH1158 (equivalent to BAC 7363)

Custom PVF film colors can be accommodated with negotiated minimum purchase quantity, and/or inventory commitment.

Clear film is available with any std or custom color of Lexan F6000 sheet



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Available Thickness and mass per square foot				
Order Gauge (inch)	0.04	0.075	0.093	0.125
Total Gauge* (inch)	0.042	0.077	0.095	0.127
lb/sf	0.2686	0.4898	0.60356	0.8058
Available Thickness and mass per square meter				
Order Gauge (mm)	1.02	1.91	2.36	3.18
Total Gauge* (mm)	1.07	1.96	2.41	3.23
Kg/m ²	1.312	2.392	2.947	3.935

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